

# ANJANA ARUNKUMAR

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## RESEARCH INTERESTS

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My research interests lie at the intersection of **visual cognition**, **technological literacy**, **natural language**, **virtual reality**, and **data visualization**. Specifically, I investigate how visualization aesthetics and affordances influence decision-making, and build visual analytics pipelines and user interfaces. I also have a background in exploring bias in **natural language models**, learning from **instructions/prompting**, designing explainable systems for **applied machine learning and data science**, and investigating the influence of visualization techniques in **supply chain and project management**. I am also interested in developing visualization systems to simplify decision making by low literacy populations in domains like **education** and **healthcare**.

## EDUCATION

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### Arizona State University

#### Ph.D. in Computer Science

 August 2019 – May 2023 (expected)

 School of Computing and Augmented Intelligence, Tempe, Arizona

- **Dissertation:** Empowering Non-Experts: Bridging the Gap between Visualization Design Intent and Usage through Human-Driven Principles and Tools.
  - **Committee:** Chris Bryan, Ross Maciejewski, Chitta Baral, Gi-Yeul Bae
  - **Research Assistant** at Sonoran Visualization Laboratory, School of Computing and Augmented Intelligence.
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### Meenakshi Sundararajan Engineering College (Anna University)

#### B.E. in Computer Science and Engineering

 June 2015-May 2019

 Department of Computer Science, Chennai, Tamil Nadu, India

- Anna University **Gold Medal Recipient** (2015-19), for 1st Rank in B.E. Computer Science and Engineering amongst 15000 students
  - Published in **2 conferences** and **1 journal** as primary contributor.
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## ACHIEVEMENTS

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- **Awardee** of Gerald Farin Memorial Fellowship, ASU, 2023.
- **Honorable Mention** in VAST challenge, 2020.
- **Finalist** in Undergraduate Poster competition, NEDSI 2018.

## RESEARCH EXPERIENCE

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### Arizona State University

#### Graduate Researcher

 August 2019 – Present


 Tempe, AZ, USA

- Advisor: Chris Bryan
  - Research on topics including visualization, data storytelling, visual cognition and perception, natural language processing, and visual analytics as a member of the Sonoran Visualization Laboratory. Additional duties include leading lab meetings, planning group outings, advising junior members, and helping with grant writing.
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### National Renewable Energy Laboratory

#### Graduate Student Intern

 June 2023 – August 2023

 Golden, CO, USA

- Mentor: Kristi Potter, Samantha Molnar
- Use of **React-Native**, **Python** to implement touchscreen interactions for power system visualization exploration.
- Performing **touch gesture-tracking** to implement auto-detection of user uncertainty during visualization viewing.

- Implementing **auto-reconfiguration** of visualization appearance to resolve user difficulties and validating with a human subject study.
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## Paragon Digital Services Pvt. Ltd., Dentsu Aegis

### Undergraduate Student Intern

📅 December 2018 – April 2019

📍 Chennai, TN, India

- Mentor: Naresh Ninavarapu
  - Use of **R, Python** to implement intelligent client-product recommendation interface via **abstractive summarization**.
  - Performing **granular sentiment detection**, using a recurrent neural network approach, over a dataset of online reviews for Slack.
  - Building a client interface, flagging sentiments and sarcasm in opinion units, and generating an **interactive visualization** dashboard of the same.
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## Paragon Digital Services Pvt. Ltd., Dentsu Aegis

### Undergraduate Student Intern

📅 June 2018 - August 2018

📍 Chennai, TN, India

- Mentor: Naresh Ninavarapu
  - Training in Data Analysis Techniques, **Digital Marketing and Business Intelligence Tools**.
  - Analysis of chain stores for profit analysis and factors: use of **Tableau and SQL** to make **recommendations** regarding marketing strategies for client products.
  - **Survey design and ad campaign structuring** for an image publishing service company using Google Data Studio.
  - Use of **R tool/Python** to implement classification algorithms on data sets for an optical wear company.
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## Meenakshi Sundararajan Engineering College (Anna University)

### Undergraduate Researcher

📅 June 2017 – May 2019

📍 Chennai, TN, India

- Advisor: M.K. Sandhya
  - Undergraduate research on sentiment analysis and visualization of natural language product reviews, to generate abstractive summarizations for client reports. Organized inter-college research symposiums to showcase departmental work. Also chief editor of department's monthly newsletter, Techie Talk.
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## TEACHING EXPERIENCE

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### Guest Lecturer

#### Data Visualization, CSE 478 and 578

📅 Spring 2024

📍 Arizona State University

Instructor: Chris Bryan 30 minute bi-weekly lectures on real-world impact of visualizations complimentary to theory concepts from the main class curriculum, including visualization design technologies, impact of natural language visual cognition on data comprehension, how visualizations can be used to spread misinformation, low data-literacy populations, and visualization in education/healthcare/management. The material was developed to promote the discussion of current visualization research questions and proposed solutions in literature.

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### Instructor

#### Introduction to Programming Languages, CSE 240 (Online)

📅 Spring 2024

📍 Arizona State University

Lead instructor teaching fundamentals of diverse paradigms of programming languages, including procedural (Language C), object-oriented (Language C++), functional (Language LISP), and logic (Language Prolog) paradigm. My responsibilities include holding online office hours for three hours per week, mentoring undergraduate student projects, and grading assignments. The curriculum and assignments were designed by ASU Online facilitators.

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### Teaching Assistant

## Data Visualization, CSE 578

📅 Fall 2022

📍 Arizona State University

Instructor: Chris Bryan Students learn about techniques and algorithms for creating effective visualizations based on principles from graphic design, visual art, perceptual psychology and cognitive science to enhance the understanding of complex data. My responsibilities included holding office hours, and mentoring independent graduate student projects intended for workshop/main conference publication (HTML, JavaScript, D3, AWS, NodeJS, Python).

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## Teaching Assistant

### Database Management, CSE 412

📅 Fall 2019

📍 Arizona State University

Instructor: Mutsumi Nakamura Students are introduced to DBMS concepts. Data models and languages. Relational database theory. Database security/integrity and concurrency. My responsibilities included grading assignments, holding office hours, mentoring student projects, and leading a two-hour recitation session every week teaching the DBMS setup and queries (SQL, SCALA, R).

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## Teaching Assistant

### Data Structures and Algorithms, CSE 310

📅 Fall 2019

📍 Arizona State University

Instructor: Yingzhen Yang Students learn about advanced data structures and algorithms, including stacks, queues, trees (B, B+, AVL), and graphs. Searching for graphs, hashing, external sorting. My responsibilities included grading assignments, holding office hours, and leading a two-hour recitation session every week teaching the algorithm implementations and case study problems (Visual Studio, C++).

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## STUDENT MENTORING

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- Agastya Seth, Yang Husurianto (Fall 2023 – Present); Project: Visualization of Natural Language Argumentation; *Graduate Student at ASU*
  - Arshdeep Sachdeva, Dhruvil Joshi, Vedant Vijay Parikh (Spring 2023 – Present) ; Project: Developing a Visualization Authoring Tool using Natural Language Prompts; *Graduate Student at ASU*
  - Jai Narula (Fall 2022 – Present) ; Project: Developing a Visualization Orchestration Tool for Classrooms; *Graduate Student at ASU*
  - Jaimie Liu (Fall 2021 – Spring 2022) ; Project: Visualization of Climate Change Data in Immersive and Desktop Virtual Reality; *Undergraduate Student at ASU*
  - Jose Elenes (Fall 2021 – Spring 2022) ; Project: Visualization of Drone Flight Anomalies; *Graduate Student at ASU*
  - Shubham Sharma, Rakhi Agarwal, Sriram Chandrasekaran (Fall 2021 – Spring 2022) ; Project: Visualization of Data Bias in Natural Language Instructions and Prompts; *Graduate Student at ASU*
  - Bhavdeep Sachdeva (Fall 2019 – Spring 2021) ; Project: Designing a Data Quality Index for Natural Language Datasets; *Graduate Student at ASU*
  - Shashank Ginpalli (Fall 2020 – Spring 2021) ; Project: Modelling the Complexity of Flow Diagrams; *Graduate Student at ASU*
  - Nitin Gupta (Fall 2019 – Spring 2020) ; Project: Designing Visualizations for Power System Substations; *Undergraduate Student at ASU*
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## PUBLICATIONS – PEER REVIEWED JOURNAL PUBLICATIONS

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1. Comparing Collaborative Visualization Behaviors in Desktop and Augmented Reality Environments  
Michael Kintscher, Jinbin Huang, **Anjana Arunkumar**, Ashish Amresh, and Chris Bryan  
[VRST, 2023](#)
2. Image or Information? Examining the Nature and Impact of Visualization Perceptual Classification <sup>1</sup>  
**Anjana Arunkumar\***, Lace Padilla, Gi-Yeul Bae, and Chris Bryan  
[IEEE Visualization Conference, 2023](#)
3. LINGO: Visually Debiasing Natural Language Instructions to Support Task Diversity <sup>1</sup>  
**Anjana Arunkumar\***, Shubham Sharma, Rakhi Agrawal, Sriram Chandrasekaran, and Chris Bryan  
[Eurovis, 2023](#)

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<sup>1</sup> <sup>1</sup> indicates a conference presentation

4. Real-Time Visual Feedback to Guide Benchmark Creation: A Human-and-Metric-in-the-Loop Workflow **Anjana Arunkumar\***, Swaroop Mishra, Bhavdeep Sachdeva, Chitta Baral, and Chris Bryan  
[EACL, 2023](#)
5. PMU Tracker: A Visualization Platform for Epicentric Event Propagation Analysis in the Power Grid **Anjana Arunkumar\***, Andrea Pinceti, Lalitha Sankar, and Chris Bryan  
[IEEE Visualization Conference, 2022](#)
6. PMUVis: A Large Scale Platform to Assist Power System Operators in a Smart Grid **Anjana Arunkumar\***, Nitin Gupta, Andrea Pinceti, Lalitha Sankar, and Chris Bryan  
[IEEE Computer Graphics and Applications, 2022](#)
7. Benchmarking Generalization via In-Context Instructions on 1,600+ Language Tasks. Swaroop Mishra\*, Yizhong Wang\*, Pegah Alipoormolabashi, Yeganeh Kordi, Amirreza Mirzaei, **Anjana Arunkumar et. al.** Chitta Baral, Yejin Choi, Noah A. Smith, Hannaneh Hajishirzi, Daniel Khashabi  
[EMNLP 2022](#)
8. How Robust are Model Rankings : A Leaderboard Customization Approach for Equitable Evaluation **Anjana Arunkumar\***, Swaroop Mishra\*, **Anjana Arunkumar\***  
[AAAI 2021](#)
9. Bayesian Modelling of Alluvial Diagram Complexity **Anjana Arunkumar\***, Shashank Ginpalli, and Chris Bryan.  
[IEEE Visualization Conference, 2021](#)

## **PUBLICATIONS – PEER REVIEWED CONFERENCE PUBLICATIONS**

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1. Examining the Effect of Visualization Proxemics on Decision Making using Touchscreen Dashboards **Anjana Arunkumar\***, Daniel Ortiz, Arunkumar Madapusi  
[Decision Sciences Institute Annual Conference, 2023](#)
2. Automated Construction of Business Intelligence Dashboards Using Artificial Intelligence Tools **Anjana Arunkumar\***, Daniel Ortiz, Arunkumar Madapusi  
[Decision Sciences Institute Annual Conference, 2023](#)
3. Examining The Effects of Visual Redundancy on Understanding Uncertainty Representations in Schedule Risk Analysis **Anjana Arunkumar\***, Daniel Ortiz, and Arun Madapusi  
[Southwest Decision Sciences Institute Annual Conference, 2023](#)
4. Examining the Effect of Reconfiguration Interactions on Understanding Uncertainty in Supply Chain Disruption **Anjana Arunkumar\***, Daniel Ortiz, and Arun Madapusi  
[Southwest Decision Sciences Institute Annual Conference, 2023](#)
5. Examining the Effect of Visual Redundancy on the Understanding of Visualizations in Procurement and Sourcing **Anjana Arunkumar\***, Daniel Ortiz, Arunkumar Madapusi  
[Decision Sciences Institute Annual Conference, 2022](#)
6. Examining the Effect of Reconfiguration Interactions on the Understanding of Anomalies in Supply Chain Management **Anjana Arunkumar\***, Daniel Ortiz, Arunkumar Madapusi  
[Decision Sciences Institute Annual Conference, 2022](#)
7. Evaluation of Visual Uncertainty Representations in Schedule Risk Analysis **Anjana Arunkumar\***, Daniel Ortiz, Arunkumar Madapusi  
[Midwest Decision Sciences Institute Annual Conference, 2022](#)
8. Modelling the Complexity of Risk Centered Supply Chain Network Visualization **Anjana Arunkumar\***, Daniel Ortiz, Arunkumar Madapusi  
[Midwest Decision Sciences Institute Annual Conference, 2022](#)
9. Impact of Uncertainty Representation on Decision Making for Business Network Visualization **Anjana Arunkumar\***, Daniel Ortiz, Arunkumar Madapusi  
[Decision Sciences Institute Annual Conference, 2021](#)
10. Bayesian Modelling of Uncertainty in Schedule Risk Analysis using Gantt Charts **Anjana Arunkumar\***, Daniel Ortiz, Arunkumar Madapusi  
[Decision Sciences Institute Annual Conference, 2021](#)
11. Modelling the Complexity of Supply Chain Network Visualization **Anjana Arunkumar\***, Daniel Ortiz, Arunkumar Madapusi  
[Decision Sciences Institute Annual Conference, 2021](#)
12. Strategy-Enterprise System Alignment and Firm Performance **Anjana Arunkumar\***, Arunkumar Madapusi\*  
[Northeast Decision Sciences Institute Annual Conference, 2021](#)
13. Investigating the Influence of Top Management Support in Systemic Enterprise System Deployments **Anjana Arunkumar\***, Arunkumar Madapusi\*

- Decision Sciences Institute Annual Conference, 2020
14. Examining Data Visualization's Impact on Decision Making ◀  
Anjana Arunkumar\*, Arunkumar Madapusi  
Decision Sciences Institute Annual Conference, 2020
  15. Investigating the Influence of Chart Embellishment on Decision Making ◀  
Anjana Arunkumar\*, Arunkumar Madapusi  
Decision Sciences Institute Annual Conference, 2020
  16. Integration Mechanisms, Absorptive Capacity, Enterprise Systems ◀  
Anjana Arunkumar\*, Arunkumar Madapusi\*  
Decision Sciences Institute Annual Conference, 2019
  17. Relational Capital Enterprise Systems ◀  
Anjana Arunkumar\*, Arunkumar Madapusi\*  
Decision Sciences Institute Annual Conference, 2019
  18. The Role of Consultants in Enterprise Systems ◀  
Anjana Arunkumar\*, Arunkumar Madapusi\*  
Decision Sciences Institute Annual Conference, 2019
  19. Abstractive Summarization Through Sentiment Analysis Of User Product Reviews - An RNN Approach ◀  
Anjana Arunkumar\*, Sandhya, M.K.  
Decision Sciences Institute Annual Conference, 2019
  20. Active Learning Methodology: Bridging Theory and Practice ◀  
Anjana Arunkumar\*, Sandhya, M.K.\*, Arunkumar Madapusi\*  
Southwest Decision Sciences Institute Annual Conference, 2019
  21. ES Configurations and their Impact on firm Performance ◀  
Anjana Arunkumar\*, Monica Jenefer, Arunkumar Madapusi\*  
Southwest Decision Sciences Institute Annual Conference, 2019
  22. The Role of Moderators in ERP System Deployment Success ◀  
Anjana Arunkumar\*, Monica Jenefer, Arunkumar Madapusi\*  
Southwest Decision Sciences Institute Annual Conference, 2019
  23. Competences Influencing Absorptive Capacity in Enterprise Systems ◀  
Anjana Arunkumar\*  
Decision Sciences Institute Annual Conference, 2018
  24. Enterprise System Configuration and Performance ◀  
Anjana Arunkumar\*  
Decision Sciences Institute Annual Conference, 2018
  25. The Influence of Alignment in Enterprise System Deployments ◀  
Anjana Arunkumar\*  
Decision Sciences Institute Annual Conference, 2018
  26. Absorptive Capacity in Enterprise Systems ◀  
Anjana Arunkumar\*, Arunkumar Madapusi  
Northeast Decision Sciences Institute Annual Conference, 2018 (Finalist : Undergraduate Poster Competition)
  27. Configuring SME Enterprise Systems ◀  
Anjana Arunkumar\*, Arunkumar Madapusi\*  
Northeast Decision Sciences Institute Annual Conference, 2018
  28. Critical Success Factors in Enterprise Systems ◀  
Anjana Arunkumar\*, Arunkumar Madapusi\*  
Northeast Decision Sciences Institute Annual Conference, 2018
  29. The Influence of Competency Factors in Enterprise System Deployments ◀  
Arunkumar Madapusi\*, Anjana Arunkumar  
Decision Sciences Institute Annual Conference, 2017
  30. The Influence of Knowledge Capabilities in Enterprise System Deployments ◀  
Arunkumar Madapusi\*, Anjana Arunkumar  
Decision Sciences Institute Annual Conference, 2017
  31. The Influence of Knowledge Capital in Enterprise System Deployments ◀  
Arunkumar Madapusi\*, Anjana Arunkumar  
Decision Sciences Institute Annual Conference, 2017

## **PUBLICATIONS – PEER REVIEWED WORKSHOP PAPERS**

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1. A Visual Exploration of Fair Evaluation for ML - Bridging the Gap Between Research and the Real World ◀  
Anjana Arunkumar\*, Swaroop Mishra, Chris Bryan

- [Visualization for AI Explainability \(VISxAI workshop\)](#), IEEE Visualization Conference, 2020
2. DQI: A Guide to Benchmark Evaluation  
Swaroop Mishra\*, [Anjana Arunkumar](#), Bhavdeep Sachdeva, Chris Bryan, Chitta Baral  
[Uncertainty Robustness in Deep Learning Workshop, ICML, 2020](#)
  3. Our Evaluation Metric Needs an Update to Encourage Generalization [↩](#)  
Swaroop Mishra\*, [Anjana Arunkumar](#), Chris Bryan, Chitta Baral  
[Uncertainty Robustness in Deep Learning Workshop, ICML, 2020](#)
  4. VAIDA: An Educative Benchmark Creation Paradigm using Visual Analytics for Interactively Discouraging Artifacts [↩](#)  
Swaroop Mishra\*, [Anjana Arunkumar\\*](#), Bhavdeep Sachdeva, Chris Bryan, Chitta Baral  
[Crowd Science Workshop: Remoteness, Fairness, and Mechanisms as Challenges of Data Supply by Humans for Automation, NeurIPS, 2020](#)
  5. Real-Time Visual Feedback for Educative Benchmark Creation: A Human-and Metric-in-the-Loop Workflow Artifacts [↩](#)  
[Anjana Arunkumar\\*](#), Swaroop Mishra, Bhavdeep Singh Sachdeva, Chitta Baral, Chris Bryan  
[HAMLETS \(Human And Machine in-the-Loop Evaluation and Learning Strategies Workshop\), NeurIPS, 2020](#)
  6. Front Contribution instead of Back Propagation  
Swaroop Mishra\*, [Anjana Arunkumar](#)  
[Beyond Backpropagation: Novel Ideas for Training Neural Architectures \(Workshop\), NeurIPS, 2020](#)
  7. Is High Quality Data All You Need?  
Swaroop Mishra\*, [Anjana Arunkumar](#), Bhavdeep Sachdeva  
[The pre-registration experiment: an alternative publication model for machine learning research \(Workshop\), NeurIPS, 2020](#)

## **PUBLICATIONS – PEER REVIEWED CONTEST ENTRIES**

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1. TotemFinder: A Visual Analytics Approach for Image-based Key Players Identification  
Jinbin Huang\*, Aditi Mishra, [Anjana Arunkumar](#), Chris Bryan  
[VAST Challenge, IEEE Visualization Conference, 2020 \(Honorable Mention\)](#)

## **PUBLICATIONS – WORKS IN PROGRESS OR UNDER REVIEW**

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1. Modeling and Measuring the Chart Communication Recall Process  
[Anjana Arunkumar](#), Chris Bryan, Lace Padilla, Gi-Yeul Bae (*under review*)
2. Investigating the Lasting Influence of VR on Personal Viewpoints about Climate Change  
[Anjana Arunkumar](#), Jaimie Liu, Chris Bryan (*under review*)
3. Evaluating Cluster Dendrograms for Spatiotemporal Anomaly Tracking  
[Anjana Arunkumar](#), Andrea Pinceti, Lalitha Sankar, Chris Bryan (*under review*)
4. Drone Tracker: A Visualization Platform for Drone Flight Analysis  
[Anjana Arunkumar](#), Jose Elenes, Chris Bryan (*under review*)
5. Centering Multi-Lingualism in Data Visualization  
[Anjana Arunkumar](#), Lace Padilla, Chris Bryan (*in-progress*)
6. Genie Vis: Natural Language Prompting for Visualization Authoring  
[Anjana Arunkumar](#), Arshdeep Sachdeva, Jai Narula, Vedant Vijay Parikh, Chris Bryan (*in-progress*)
7. Examining the Impact of Interruptions on Visualization Consumption  
[Anjana Arunkumar](#), Lace Padilla, Chris Bryan (*in-progress*)
8. Visualization Proxemics for Touch Screen Analysis of Smart Grids  
[Anjana Arunkumar](#), Samantha Molar, Kristi Potter, Chris Bryan (*in-progress*)

## **INVITED TALKS**

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1. Data Visualization Design for the Mind's Eye: Internalizing What's In Sight  
[Emory University](#), October 2023.
2. What's In-Sight: How We Truly Internalize Data Visualizations  
[University of Victoria](#), September 2023.
3. Designing Touchscreen Interactions to Resolve User Uncertainty in Spatiotemporal Analysis with Maps  
[National Renewable Energy Laboratory](#), July 2023.
4. Examining Signifiers and Affordances in Data Visualization  
[Arizona State University](#), October 2021.
5. Data Breach Chronicles: Lessons from Cyber Forensics Case Studies  
[Meenakshi Sundararajan Engineering College](#), October 2019



6. Text Mining for Pattern Detection in Digital Forensics  
[Meenakshi Sundararajan Engineering College](#), October 2018
7. Data Mining in Criminology – Crime Analysis and Hotspot Mapping  
[Madras Institute of Technology](#), September 2018
8. Beyond Metrics: Enhancing Quality with Six Sigma and Benchmarking  
[Meenakshi Sundararajan Engineering College](#), October 2017
9. Biomimicry in Robotics: Electronic Skin for Insect-Inspired Models  
[Loyola-ICAM College of Engineering and Technology](#), September 2017
10. Smart Skin: How Electronic Skin Technology is Transforming Wearable Devices  
[Meenakshi Sundararajan Engineering College](#), October 2016

## SERVICE

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- **Organizer:**
  - Program Committee Member of Vizsec 2023 (@IEEE VIS)
  - Program Committee Member of EnergyVis 2023 (@IEEE VIS)
  - Program Committee Member of EMNLP Industry Track 2023
  - Program Committee Member of ACL 2023
  - Program Committee Member of EMNLP 2022–2023
  - Program Committee Member of VLDB 2021 Crowd Science Workshop
  - Organizer of E3 symposium 2016-18 at Meenakshi Sundararajan Engineering College (Anna University)
  - Organizer of Kranti symposium 2016-18 at Meenakshi Sundararajan Engineering College (Anna University)
- **Session Chair:**
  - DSI, SWDSI 2023: Supply Chain Management, Business Analytics
  - DSI, SWDSI 2022: Project Management
  - DSI, SWDSI 2021: Supply Chain Management, Project Management
  - DSI, SWDSI 2020: Business Analytics, Information Technology Management
  - DSI 2019: Business Analytics
- **Reviewer:**
  - Visualization/HCI: IEEE Vis, TVCG, PacificVis, EuroVis, ACM SIGCHI, VRST, VAST
  - NLP/ML: EMNLP, ACL, EAACL, ICML, NAACL, NeurIPS, Data Technologies and Applications
  - Management: DSI, SWDSI, NEDSI, MWDSI

## TECHNICAL SKILLS

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### Languages

- Python, R, C, C++, MySQL, Kotlin, Perl
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### Web Technologies

- D3.js, JavaScript, JSON, NodeJS, HTML, CSS, JQuery, WordPress, Java, XML, Kivy, React, React-Native
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### Machine Learning Frameworks

- Scikit-Learn, Tensorflow, Keras, NLTK, PyTorch, Huggingface
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### Tools

- Tableau, Gephi, MATLAB, Git, SPSS, LaTeX, Colab, Eclipse, Google Data Studio

## RELEVANT COURSEWORK

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- **ASU:** Data Visualization, Natural Language Processing, Current issues in Visual Cognition, Current Issues in Cognitive Science, Statistical Machine Learning: From Theory to Algorithms, Data Mining, Foundation of Algorithms, Artificial Intelligence, Mobile Computing, and Information Assurance & Security.

- **Anna University:** Engineering Graphics, Database Management Systems, Computer Networks, Operating Systems, Software Engineering, Internet Programming, Object Oriented Analysis & Design, Computer Graphics, Cryptography and Network Security, Grid and Cloud Computing, Adhoc and Sensor Networks, Human Computer Interaction, Neural Networks

## LANGUAGES SPOKEN

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- English- Native Proficiency
- Tamil- Native Proficiency
- Hindi- Professional working proficiency
- Japanese (N4) - Limited working proficiency
- Sanskrit - Professional working proficiency

## EXTRA CURRICULAR ACTIVITIES

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- Member of the AI Club @ASU, 2019–2023
- Member of the Women in STEM Club @ASU, 2019–2023
- Member of the Graduate and Professional Student Association @ASU 2019-2023
- Mentor, ASA DataFest Competition 2023
- Member of the Computer Society of India, 2019–2023
- Member of the Lions Club
- Member of the Interact Club/Rotary International
- Quizzing and Trivia
- Well-versed in Violin, Vocal Music, and Art Media

## REFERENCES

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- **Chris Bryan**  
Assistant Professor  
School of Computing and Augmented Intelligence – Arizona State University, Tempe  
[cbryan16@asu.edu](mailto:cbryan16@asu.edu)
- **Ross Maciejewski**  
Associate Professor & Director of the School of Computing and Augmented Intelligence  
School of Computing and Augmented Intelligence – Arizona State University, Tempe  
[rmacieje@asu.edu](mailto:rmacieje@asu.edu)
- **Chitta Baral**  
Professor  
School of Computing and Augmented Intelligence – Arizona State University, Tempe  
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- **Lace Padilla**  
Assistant Professor  
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- **Swaroop Mishra**  
Research Scientist  
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[swaroopranjanmishra@gmail.com](mailto:swaroopranjanmishra@gmail.com)