Shruti Misra

Mixed-methods researcher and data scientist with 4+ years of experience
shrm145@uw.edu | 1.425.770.9521| Seattle, WA | shruti-misra.github.io

EDUCATION

PhD, Electrical and Computer Engineering (GPA: 3.81/4.00), *University of Washington*   (Sept 2018- Oct 2023)
- Relevant coursework: Data Visualization, Statistical Learning and Qualitative Methods
- Nine peer-reviewed publications in ASEE and CDC

MS, Electrical and Computer Engineering, *University of Washington*   (Sept 2016- Jun 2018)
BS, Electrical and Computer Engineering, *University of Washington*   (Sept 2012 – Jun 2016)

SKILLS

Programming: Python (pandas, matplotlib, scikit-learn, scipy, seaborn, keras), R, git, HTML/CSS, MATLAB, C
Research Methods: Exploratory factor analysis, regression, classification, network analysis, surveys, document analysis, interviews

WORK EXPERIENCE

Venture Analyst, *Pack Ventures*   (Jan 2022-Present)
- Aided informed investment decision-making by conducting thorough market and industry research on opportunities under consideration.
- Assisted senior partners with deal analysis, and due diligence for early-stage companies in various industries, resulting in successful investments and portfolio growth.
- Prepared investment memos highlighting investment thesis, key risks, and opportunities.

Graduate Research Assistant, *University of Washington*   (Sept 2018 – Present)
Designed quantitative and qualitative studies to key identify factors that characterize innovation ecosystems.
- Identified potential metrics of regional innovation through analysis of data from 5+ public and private databases.
- Collaborated in a team to design a dashboard in Tableau for diverse stakeholder groups.
- Obtained user feedback through surveys and interviews to identify relevant metrics and key design directions.
Designed quantitative and qualitative studies to understand students' design experiences in industry capstone projects.
- Designed and conducted surveys of 150+ students over 2 years to study students' perceptions of learning.
- Identified key factors related to student learning through exploratory factor analysis and regression models in R.
- Highlighted the role of mentor support and student resilience in the capstone through qualitative analyses.
- Published findings in a leading engineering education conference.
Developed a machine learning approach to model defense against Advanced Persistent Threats (APTs) in cybersecurity.
- Developed a new model to simulate APTs by implementing input convex neural networks (ICNN) in Python.
- Used training data from real cyber-attacks to achieve optimal strategies for the attacker and defender.
- Published and presented the work at a leading conference, in collaboration with other co-authors.

Senior Design Capstone Manager, *University of Washington*   (Sept 2018 – Present)
- Led the development and growth of 5 cohorts of the capstone program, during which the program grew from 85+ (20+ projects) to 250+ students (50+ projects).
- Managed a team of 4 teaching assistants, ensuring consistent program outcomes for students.
- Designed and implemented a program evaluation framework, resulting in improvement in student engagement.
- Mentored 150+ (50+ teams) in design project scoping, technical assistance, and project management, resulting in successful project completion.

Commercialization Fellow, *Buerk Center for Entrepreneurship, University of Washington*   (Jun 2022-Aug 2022)

- Conducted 20+ stakeholder interviews to inform the design, pricing, regulatory, and reimbursement strategy for a childhood asthma management app.
- Conducted market research and competitor analysis of 20 competitors to identify key design requirements for a minimum viable product (MVP) and target beachhead customers to inform data-driven product development.
- Delivered and presented a feasible 6-year commercialization plan to the client and program coordinators.

Firmware Engineering Intern, *Microsoft*   (Jun 2019-Sept 2019)

- Designed and tested firmware to support sparse computations in Brainwave's BERT framework.
- Demonstrated significant decrease in latency that scaled with sequence length and sparsity.
- Identified ways to improve resource utilization by packing dense tiles together, highlighting the potential for even greater improvements with larger and sparser datasets.

AWARDS & HONORS

- Venture Fellowship, Pack Ventures, 2023
- [Husky 100](#), 2022: Awarded annually to 100 students across all University of Washington (UW) campuses.
- Finalist, Hollomon Health Innovation Challenge, UW, 2022
- Finalist, Excellence in Teaching Award, University of Washington, 2022: Awarded across all departments at UW.
- ITHS/WRF Summer Commercialization Fellowship, Buerk Center for Entrepreneurship, UW, 2022
- Best Diversity Paper in the New Engineering Educators Division, ASEE, 2021
- Outstanding Teaching Assistant Award, Department of Electrical and Computer Engineering, UW, 2018
- Emerging Leaders in Engineering Scholarship, College of Engineering, UW, 2015