Dhanya Narayanan

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Education

University of Michigan, Ann Arbor — **Ann Arbor, USA**
Intended Major: B.S. in Computer Science, B.S. in Cognitive Science — *August 2020 – May 2024*

- **GPA:** 3.95/4.0
- **Course Highlights:** Data Structures and Algorithms, Discrete Math, Applied Computational Machine Learning, Introduction to Cognitive Science
- **Awards/Honors:** William J. Branstrom Prize, 4 semesters University Honors, James B. Angell Scholar
- **Activities:** Michigan Data Science Team, Eta Kappa Nu (Engineering Honor Society), Women's Rugby

GEMS Modern Academy, Dubai — **Dubai, UAE**
IB Diploma — *April 2006 – June 2020*

- **Score:** 42/45
- **Course Highlights:** IB Mathematics HL, IB Computer Science HL, IB Physics HL

Experience

Electrical and Computer Engineering Department - University of Michigan — **Ann Arbor, USA**
Reseach Assisstant — *May 2022 – Present*

- Conducting research on election security under professor J. Alex Halderman, such as evaluating states' pre-election testing protocols, studying the security standards of online voting software, and investigating privacy vulnerabilities connected with election data.
- Contributed to a now-published paper analyzing the Logic and Accuracy testing practices across the United States by liaising with election officials to gather data on individual procedures from all 50 states.
- Currently working on projects involving reverse engineering election management systems to test for security vulnerabilities, working towards a research paper.

University of Michigan, Ann Arbor — **Ann Arbor, USA**
Research Assistant — *Sept 2021 – April 2022*

- Evaluated the effectiveness of Prediction Markets in aggregating multiple beliefs and forecasting outcomes of uncertain future events.
- Built an agent-based simulation of a prediction market ecosystem for binary outcomes using the Logarithmic market scoring rule.
- Ran experiments within the simulation to test different hypotheses and analyze data on market properties using probability theory and statistical tools, and documented findings through reports written in LaTeX.
- Presented research and findings at the annual UofM Undergraduate Research Symposium and earned the Blue Ribbon award for outstanding presentation.

Technical Skills

- **Programming Languages:** C++, Python, Java, Julia, HTML, CSS
- **Tools:** Git for Version Control, LaTeX, Google Colab

Additional Experience

- Performed User Acceptance Testing on a new product at GEMS Education — *June – August 2021*
- Designed and instructed an Elementary Spanish course at Wave LF — *August 2020*
- Developed a Music Practice Scheduling and Progress Tracking Desktop App — *Sept 2019 – April 2020*