Danica Xiong

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Education

Stanford University *Stanford, CA*

M.S. IN COMPUTER SCIENCE *Sept 2023 – June 2025*

- Incoming Masters student

University of California, San Diego *San Diego, CA*

B.S. IN COMPUTER SCIENCE AND ENGINEERING *Sept 2018 – March 2023*

- 3.92 GPA: Magna Cum Laude Latin honors, Warren Honor Society, 8x Provost Honors Recipient
- 4.0 GPA: Minor in Mathematics, 3.98 Major GPA

University of Toronto, St. George *Toronto, ON*

SHADOWED SALLY DAUB (FOUNDER OF ViXS) *Oct 2017*

- Supported entrepreneurs to conceptualize and polish their pitches involving AI applications
- Attended meetings with CEOs (iBinary's Ken Nickerson, Kik's Ted Livingston) to discuss AI development

Experience

Amazon *Austin, TX*

SOFTWARE DEVELOPMENT ENGINEER INTERN *Jun 2022 – Sep 2022*

- Worked on time-series ML model that generates inferences, forecasting customer grocery sales for supply chain
- Created and revised database and application designs, approved by Senior Software Developers, Managers, and Amazon Scientists
- Cleaned and optimized data using AWS services for backtesting and architecting a new data pipeline
- Designed and implemented full stack portal to display forecast data in real-time, loads in < 5 seconds & within minutes of generation

Center for Visual Computing *San Diego, CA*

UNDERGRADUATE RESEARCHER *Sep 2022 – Mar 2023*

- Benchmarked optimal automatic differentiation (Forward vs Backward) workflow for differential rendering
- Built Python Compiler Javana that compiles inverse rendering programs to assembly to optimize for register mapping and spilling

Human-centered eXtended Intelligence Lab *San Diego, CA*

CO-AUTHOR, UNDERGRADUATE RESEARCHER *Sep 2021 – Jun 2022*

- Aggregated time and user data, wrote and tested VR scripts, made interface mockups, 3D models, and Unity scenes for XR application
- Conducted studies for Unmapped, an AR/VR Networked app w/ holographic projections, to perform remote surgical operations

University of California, San Diego *San Diego, CA*

INSTRUCTIONAL ASSISTANT *Jun 2021 – Mar 2023*

- Wrote exams and homework problems, programming assignments, test cases, reference solutions, automatic grading scripts, and held office hours (helped hundreds of students) for: Design and Analysis of Algorithms, Functional Programming, and Computer Graphics
- Taught students topics: Dynamic Programming, Graph Algorithms, Lambda Calculus, Higher Order Functions, OpenGL

Awards & Publications

2022	**Co-Author**, UnMapped: Exploiting Experts' Situated Experiences in Collaborative Mixed Reality	*SIGCHI 2023*
2022	**Presenter**, Developed and demoed real time 3D networked engine at Qualcomm Center, and featured realtime raytracing with hardware supported acceleration	*San Diego, CA*
2019	**Top 5**, out of 70 teams at HACKXX. Made an interactive VR museum that transports users to event	*San Diego, CA*
2018	**Silver**, SKILLS Robotics competition (Built 2 remote controlled, 1 autonomous robot using VEX)	*Toronto, ON*

Skills

Languages	Java, CC++C#, Python, Javascript, Haskell, GLSLHLSL, LaTeX, System Verilog, MATLAB, R
Graphics/Game Development	DirectX12, OpenGL, OpenCV, Unity, Steam VR, Oculus, Autodesk Maya
Web Development	ReactJS, SQL, HTML, CSS, REST API, HTTPS API, Node.JS, JWT Tokens
Cloud & AWS Technology	S3, Lambda, DynamoDB, AuroraDB, Athena, Glue, EC2
Project Management	Agile, Github, Git, Github Actions
Unix software tools	VI, Bash, Valgrind, ANT, shell scripting