Danny Xu

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EDUCATION

University of Wisconsin, Madison — Madison, WI
Bachelor of Science in Computer Science, Mathematics — *Sep. 2023 - May 2025*
- **Awards**: Undergraduate Research Scholar
- **Current Coursework**: Programming III, Machine Learning for Engineers, Calculus III, Linear Algebra

University of Minnesota, Twin Cities — Minneapolis, MN
Transferred Institutions, Honors Computer Science, GPA: 3.96/4.00 — *Sep. 2022 - May 2023*
- **Awards**: Dean's List (2x), Presidential Scholar
- **Leadership**: App Developer Club Executive Officer, Science and Engineering Student Board Sub-Director

TECHNICAL SKILLS

Languages & Tools: JavaScript, TypeScript, Java, C#, Python, SQL, HTML/CSS, Swift, Power BI, Unix, Azure
Frameworks: React JS, Next JS, Node JS, ASP.NET MVC, Entity Framework Core, SwiftUI
Libraries: Pandas, NumPy, Matplotlib, TensorFlow, Scikit-learn, ChakraUI, TanStack Query, HighChartsJS
Certificates: Supervised Machine Learning (Stanford), Programming Fundamentals (Duke)
Coursework: Algorithms and Data Structures, Machine Architecture

EXPERIENCE

CommScope — Shakopee, MN
Software Engineer — *Aug. 2023 - Present*
- Enhancing and expanding lab testing software from internship, with a focus on global deployment and efficiency improvements leveraging **React, ASP.NET and Microsoft SQL Server**.
- Achieve a **20% boost** in build & deployment speeds by transitioning **Azure DevOps CI/CD pipelines** to YAML, by implementing parallelism and caching.
- Develop a **dynamic Power BI dashboard** for lab technicians, leading to data-driven insights.

Software Engineer Intern — *May 2023 - Aug. 2023*
- **Engineered a comprehensive full stack web app** for lab test analysis, utilizing React, Next.js, ChakraUI.
- Enhanced testing efficiency by 80%, saving over 600 hours annually by restructuring the lab storage/retrieval system, leveraging **EF Core, REST APIs, SQL Server** on the **ASP.NET MVC** backend.
- **Achieved a 400% speed increase** in website load times, optimizing code through multi-threading (parallelization), thread synchronization (concurrency), and micro-optimization.

University of Minnesota - Aerospace Department — Minneapolis, MN
Undergraduate Research Assistant — *Nov. 2022 - May 2023*
- Engaged in a U.S. Air Force-sponsored project through the **University of Minnesota Small Satellite Research Lab**, focusing on the development of CubeSats for the EXACT & IMPRESS missions
- Strengthened low-level C++ communications protocols between the ground station and small cube satellites
- Conducted unit testing in Python to ensure accurate and efficient data transmission

PROJECTS

LeetCode Problem Tracker | *TypeScript, Node.js, MongoDB, React.js, ChakraUI, Next.js*
- Develop a **full stack** React web app (bootstrapped with Next.js) to create personalized LeetCode study plans
- Integrate the **SM-2 algorithm** to dynamically tailor problem difficulty to individual user performance
- Leverage Puppeteer for efficient web scraping, extracting problem details like titles, links, and topics
- Design and execute MongoDB schemas/models, ensuring seamless data management to store user progress

Breast Cancer Detector | *Python, TensorFlow, Scikit-Learn*
- Developed a **breast cancer detection model** using logistic regression, achieving an accuracy of **83%**
- Utilized OpenCV for image preprocessing, leveraging resizing, grayscale conversion, and normalization for training
- Performed hyperparameter tuning using GridSearchCV to optimize the logistic regression model parameters, enhancing predictive performance, and employed Scikit-Learn for splitting data into training and test sets, and for standardizing the features using StandardScaler, contributing to the model's robustness

Cash Register Counter | *Swift, SwiftUI, Testflight*
- Built an **iOS application** to expedite the counting of cash-registers, leveraging Swift and SwiftUI
- Amassed **30,000+** impressions and **5,000+** active user sessions by publishing the app on the Apple App Store
- Implemented MVVM Architecture to organize code development and improve code maintainability