Mingli Zhang
Software Developer Engineer

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Work Experience

ChampionPDI, Jan 2023 - Sep 2023
Lead Software Developer - Part Time | North Carolina (hybrid), USA
Created and launched a powerful sales representative management platform for Cutco.
- Led a team of 6 developers to successfully launch a sales representative management platform that gained 200+ users in the first week.
- Initiated weekly scrum meetings, code reviews, and tech talks, which reduced learning costs and enabled all developers to contribute quality code after just 1 month.
- Delivered a production-quality web application within just 2 months using **HTML**, **CSS**, **JavaScript**, and **WebPack** for frontend and **Firebase** backend.
- Transitioned the project to **React** post-launch, which resulted in a 60% reduction in database queries and a 50% faster loading speed.

Cymantix, Oct 2021 - Feb 2023
Software Engineer - Part Time | North Carolina (hybrid), USA
A SaaS tech startup that integrated machine learning with data analytics and information retrieval.
- Identified and resolved **communication issues** proactively between clients and engineers, which boosted the company's reputation and gained 3 additional clients.
- Investigated replacing **K-Means** with **Hierarchical clustering**, which reduced computation and user wait time by 10%-60%.
- Optimized real-time news analysis using **multithreading** and **Socket.io** and decreased user wait time by 90%.
- Created a **full-stack machine-learning-driven data analytics platform** in a global team of 5 engineers that secured seed-round funding.
- Refactored codebase to **Next.js** and added animations using **D3.js**, which reduced 20% code redundancy and provided a smoother user experience.

IBM, May 2021 - Aug 2021
Full Stack Engineer - Summer Intern | North Carolina (remote), USA
Worked on IBM's internal platform that provisions and customizes live demo environments.
- Co-founded an automated validation service using **SailsJS** that streamlined database maintenance and saved the team $14,000 annually by eliminating headcounts for manual tasks.
- Enhanced user experience based on user feedback using **NextJS**, which expanded the monthly user base to over 12,000+ IBMers.
- Streamlined administrative content processes, achieved faster content updates, and reduced redeployments by over 20 per week.

Major Projects

One Pixel Attack Defense, Aug 2022 - Dec 2022
UNC - Chapel Hill | North Carolina, USA
Defense against a speical adversarial attack on CNN networks
- Trained **one-pixel attack** on image recognition **CNN** that achieved a 10% success rate using limited computation power.
- Implemented **seam carving** in **Python** for a pre-process resizing operation, which reduced the attack success rate by 50%.

Research Projects, Apr 2021 - Aug 2023
UNC - Chapel Hill | North Carolina, USA
Research projects under the computer science or information science department
- Identified and resolved memory limitations using **C** in SplinterDB and only suffered a 5% performance hit.
- Visualized health data using **Tableau** for UNICEF, which aided the United Nations' efforts to support 190 disadvantaged areas.

Education

University of North Carolina at Chapel Hill
Master's of Science in Computer Science, Aug 2022 - Aug 2023
- **GPA: 3.9/4.0**.

Bachelor's of Science in Computer Science and Mathematics, Aug 2018 - May 2022
- **GPA: 3.8/4.0**, Dean's List from 2018-2022.

Skills

Coding	JavaScript, SQLite, Python(Pandas, TensorFlow, NumPy, Scikit-learn.), HTML/CSS, C/C++, LaTeX, Bash, Zsh, Java
Technologies	Next/React, React Native, Git, Flask, jQuery, Microsoft Azure, Firebase, Linux, Tableau, CronJob, Elasticsearch
Hobbies	Cooking, Barista, and Hardware