# Mingli Zhang

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## Objective

Seeking a full-time software developer/engineer position to apply my academic background and previous experience in developing user-centric products and services. Eager to contribute to a collaborative team, continuously enhance my skills, and work towards a future role as a mentor to support and guide emerging talent in the industry.

## Work Experience

**ChampionPDI** | Lead Software Developer (Part Time) | North Carolina, USA                     Jan 2023 - Sep 2023

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** | Software Engineer (Part Time) | North Carolina, USA                     Oct 2021 - Feb 2023

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.
- Integrated **Microsoft Azure** into our platform, which provided login options and secure data storage from Microsoft's cloud. Resulted in a cost-effective transition for users and gained 2 non-profit organizations as clients within 1 week.

**IBM** | Full Stack Engineer (Summer Intern) | North Carolina, USA                     May 2021 - Aug 2021

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** | UNC - Chapel Hill | North Carolina, USA                     Aug 2022 - Dec 2022

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** | UNC - Chapel Hill | North Carolina, USA                     Apr 2021 - Aug 2023

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

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