Yuwenqian Chen

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Open to relocation | Permanent Resident

Education

Stony Brook University **January 2024 - December 2025**
M.S. in Computer Science | GPA-3.63 *Stony Brook, NY*

Stony Brook University **August 2020 - December 2023**
B.S. in Computer Science and Applied Mathematics & Statistics | GPA-3.53 | Dean's List *Stony Brook, NY*

Experience

AI/MLE Intern **June 2025 -- Present**
DeepChatBI *Remote*

- Increased accuracy of LLM-generated chart content by 90% by developing a controller module that validates and refines outputs from VisualizeAgent.
- Accelerated insight generation for analytics users by building VisualizeAgent, enabling SQL outputs to be visualized in 10+ interactive chart types (line, bar, pie, scatter, etc.).
- Cut token usage by 50% and reduced latency in analytical workflows by implementing a streaming API architecture, enabling real-time multi-step reasoning and dynamic tool usage with LLMs.
- Built a metric system enabling enterprises to define atomic metrics once, allowing zero-code access for business teams and reducing analytics response time from days to minutes, thereby improving LLM-driven BI accuracy and efficiency.

Software Engineering Intern **February 2024 -- June 2024**
GroupClock Inc. *NY*

- Engineered an iOS app using SwiftUI + AVFoundation to securely capture facial data, ensuring reliable transmission for downstream ML processing.
- Designed and integrated RESTful API endpoints to transmit biometric data to machine learning pipelines, facilitating real-time model input.
- Deployed the app to 20+ beta users via TestFlight and improved load time by 30% through 4 rounds of UX iteration.
- Built a MERN stack web dashboard to manage user data, streamlining operational oversight and data consistency.

Teaching Assistant **Fall 2022, Fall 2024**
Undergraduate & Graduate CS Courses *Stony Brook, NY*

- Facilitated learning for 100+ students in CS courses by mentoring, grading, and conducting review sessions, enhancing average exam scores around 12%.

Projects

GNNs for Molecular Dynamics Simulations **May 2025 - Present**

- Collaborated on developing Graph Neural Networks implicit solvent models(eg. DimeNet, MACE) for acid molecular dynamics simulations.
- Fine-tuned DimeNet, achieving an 80% reduction in prediction loss (0.6 → 0.12) on the test set.

The Interpretation of Vanity License Plates **September 2024**

- Fine-tuned a LLaMA3-7B model using LoRA on a large-scale vanity license plate dataset (150K+ records from CA and NY), applying NLP techniques for semantic understanding and classification.
- Achieved 71% accuracy in predicting plate approval, significantly outperforming traditional lexicon-based heuristics.
- Demonstrated potential to reduce manual plate screening workload by around 30%, based on comparative inference speed and human processing benchmarks.

Health Monitoring System **September 2023**

- Enabled 30+ post-operative patients to automatically share mobility metrics (e.g., walking speed, step length) with clinicians by developing a iOS app using HealthKit, resulting in a 60% reduction in manual data collection time.
- Designed a full pipeline from iPhone-based data collection to Excel-based clinician dashboards, enabling better medical insights and decision-making.
- Collaborated in a team of three to align mobile health technology with clinical workflows using Swift, RESTful APIs, and Node.js backend.

Technical Skills

Programming: Swift, Python, Java, C++, HTML/CSS, JavaScript, TypeScript, MIPS, R, MATLAB, LaTeX

Frameworks: LLM (OpenAI, Claude, LLama), Huggingface, OpenCV, PyTorch, Tensorflow, Matplotlib, Numpy, Pandas, Spring Boot, React

Database: MongoDB, MySQL, Firebase