Wenhao He

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Technical Skills

Languages: Python, JavaScript, TypeScript, HTML/CSS, Java, C, C++, MATLAB
Cloud/Databases: SQL, AWS (SageMaker, S3), Google Cloud Platform (GCP), Azure, Google Firebase, MySQL, MongoDB
Developer Tools: Docker, Kubernetes, Git, GitHub, PyCharm, Visual Studio Code, IntelliJ IDEA, Tableau, Figma, Slack
Frameworks/Libraries: React, React Native, Django, Flask, PyTorch, TensorFlow, Scikit-learn, Matplotlib, Numpy, Pandas, Jupyter Notebook, PySpark, Apache Hadoop, OpenCV, NodeJS

Education

•University at Buffalo, The State University of New York *Aug 2022 - May 2024*
Master of Science in Engineering Science focus on Artificial Intelligence GPA 3.37/4.0
Coursework: Machine Learning, Deep Learning, Reinforcement Learning, Computer Vision, Pattern Recognition

•University at Buffalo, The State University of New York *Aug 2018 - May 2022*
Bachelor of Science in Computer Science
Coursework: Data Structures and Algorithms, Computer Networking, Systems Programming, Computational Linguistics

Work Experiences

CAN International Corp New York, NY
Software Engineer Internship *Apr 2024 - Sep 2024*

- Developed a high-performance full-stack CAN membership app featuring job searching, mentor-mentee matching, and private chat functionalities
- Implemented secure data storage, authentication, and real-time data fetching using Google Firebase
- Introduced AI to analyze job description PDFs and autofill fields for employers, streamlining manual input
- Collaborated with cross-functional teams during daily and weekly stand-ups, actively contributing to design discussions, code reviews, and sprint planning sessions
- Optimized avatar loading algorithms for **500+** users, reducing processing time from minutes to seconds ensuring application scalability

Clipp New York, NY
Software Engineer Internship *Sep 2024 - Present*

- Developed and optimized the mobile version of the Clipp App, streamlining workflows between suppliers and restaurants to facilitate efficient order placements on the platform
- Built and implemented a real-time, one-on-one chat feature using GetStream, enabling direct communication between suppliers and restaurant users within both the mobile and web applications
- Improved the product management system for suppliers, enhancing inventory tracking, pricing control, and categorization, which streamlined the process for suppliers to efficiently showcase their offerings to restaurant users
- Debugged and resolved critical system bugs, improving system reliability and fault tolerance, ensuring efficient deployments, with task tracking and bug management through Jira

Projects

Movie Recommendation System: Machine Learning Engineer *July 2024 - Present*
A web app for a movie recommendation system utilizing a custom Transformer Deep Learning model

- Built a scalable web application using custom Transformer model for personalized movie recommendation, utilizing real-time TMDb metadata
- Designed and optimized an efficient data pipeline using AWS S3 and SageMaker for large-scale model training and data storage, ensuring high availability and performance
- Implemented CI/CD practices, including automated testing and continuous integration, to maintain high code quality and system stability
- Incorporated code reviews and feedback loops to improve system performance and recommendation accuracy

Audio Cloning: Project Leader & Software Engineer *Aug 2023 - Feb 2024*
Developed SV2TTS model to replicate judge's voice from the Brown v. Board case

- Led the development of a three-stage pipeline deep learning SV2TTS model to clone voices unseen during the training
- Applied UMAP for dimensionality reduction techniques to preserve key voice features, ensuring model efficiency and scalability
- Integrated continuous model evaluation and automated testing for maintaining high voice accuracy across unseen datasets
- Collaborated with a cross-functional team in code reviews and regular sprints to improve model accuracy and reduce system latency, achieving **90%** voice replication accuracy through real-world audio comparison