Chang Zeng

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EDUCATION

University of Massachusetts Amherst **Amherst, MA, 2022-Present**
Mater of Science, Major in Computer Science **3.895 GPA**

University of Massachusetts Amherst **Amherst, MA, 2018-2022**
Bachelor of Science, Major in Computer Science; Major in Environmental Science **3.832 GPA**

TECHNICAL SKILL

- **Programming Languages**: Python, Go, C#, HTML, CSS, XAML, TypeScript, JavaScript, C++
- **Library & Framework**: TensorFlow, PyTorch, NumPy, Pandas, Docker, OpenCV,
- **Tools:** Git, Docker, Kubernetes, AWS S3, Bash, Conda, Unix/Linux, Node.js, NPM, PostgreSQL

WORK EXPERIENCE

X-Camp Tech Team Intern **Amherst, MA**
Software Engineer - Full-Stack (Go, Git, Test&Debug, CI/CD, Kubernetes, Docker) **2023-Present**

- Designed and developed a **scalable architecture** using **Golang** to seamlessly integrate Zoom API functionalities into existing systems, resulting in improved teaching and learning experience.
- Utilized an automated **CI/CD** workflow for building and deploying to a remote **Kubernetes** cluster, facilitating seamless service scaling and management in a **containerized** environment.

PROJECT EXPERIENCE

Autoencoder Optimization **Amherst, MA**
Software Engineer - Back-End (Python, Deep Learning, MLP, CNN, RNN) **2022-2023**

- Developed an **autoencoder** with a **backpropagation** mechanism to effectively denoise individual heartbeats from electrocardiogram signals, enhancing signal quality and accuracy.
- Performed a comprehensive comparison between linear and non-linear structures, including **CNN** and **RNN**, to evaluate their performance in optimizing the denoising process.
- Employed academic research methodologies to methodically **fine-tune** autoencoder model parameters, incorporating strategies like **scheduled learning rate** adjustments and varied **layer structures**, resulting in elevated denoising capabilities and heightened accuracy.

Wuhuu Information Sharing Platform **Amherst, MA**
Software Engineer - Back-End (Python, Crawler, AWS S3,) **2022-2023**

- Developed customized **crawlers** utilizing Python to systematically gather data from social platforms, focusing on user engagement trends, content popularity, and sentiment analysis.
- Implemented a robust storage infrastructure using **AWS S3** to securely store and retrieve shared files, while optimizing data retrieval and minimizing latency.

Eye Activity Tracking **Amherst, MA**
Software Engineer - Full-Stack (Python, Machine Learning, OpenCV, CUDA) **2022-2022**

- Employed various machine learning models, including the **BERT transformer** (**TensorFlow**), along with advanced techniques such as **random forests** and **stratified k-fold**, to accurately classify eye behavior patterns.
- Utilized **OpenCV** libraries to capture and process live camera feed in real-time, extracting relevant features from the eye images, such as pupil dilation and eye movement, to analyze and determine the user's eye activity.