**Zixuan (Amos) Chen**

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**EDUCATION**

**Carnegie Mellon University Pittsburgh, PA**

Master of Science in Electrical and Computer Engineering - Applied Study **May 2023**

GPA: 3.72/4.0

**University of California, Irvine Irvine, CA**

Bachelor of Science in Computer Science **Dec 2020**

GPA: 3.96/4.0 | Summa Cum Laude

**SKILLS**

**Programming Languages:** Python, Java, JavaScript, C/C++, CUDA

**Technologies:** PyTorch, Django, Apache Spark, Node.js, React.js, MySQL, MongoDB, Mockito, Git, AWS, GCP

**WORK EXPERIENCE**

**Volvo Cars Gothenburg, Sweden**

*Global Graduate* **-** Software Engineering **August 2023 - Present**

* Led the development of an AI-powered tool chain to optimize the process of debugging logs in Volvo's CI/CD pipeline for car software. Reduced manual debugging time by **80%**, significantly accelerating the development cycle.
* Contributed to the design and development of the next-generation infotainment system for Volvo's new car platform.
* Focused on optimizing the performance of Volvo's car shopping website. Reduced **First Contentful Paint (FCP)** by **35%** and **overall page load time** by **20%**, improving customer experience and increasing site engagement.

**Carnegie Mellon CyLab Pittsburgh, PA**

*Research Assistant* **May 2022 - Aug 2022**

* Deployed vulnerability detection systems on GCP using TensorFlow and PyTorch-Lightning
* Increased model performance by **19%** through hyper-parameter tuning and variable obfuscation
* Restructured project installation pipeline to create streamlined cross-platform deployment and low coupling

**Glinsun AI Wuhan, China**

*Software Engineer, 3D Simulation Team* **May 2021 - Nov 2021**

* Collaborated with 10 engineers to build a real-time physics engine for cloth simulation using C++ and CUDA
* Implemented particle dynamics and **4** features for the simulator to introduce complex object interactions: fluid, smoke, air-inflation effects, and two-way coupling
* Optimized simulator to reduce data duplication by **50%** through a unified particle model, maintaining a minimum of **60** frames per secondwhen simulating millions of particles in parallel

*Python Engineering Intern , Algorithm Team* **Feb 2021 - Apr 2021**

* Developed deep learning based human body measurement system using semi-supervised learning with PyTorch. Achieved **87%** F1-score on dataset consisting of **6000** images

**PROJECTS**

**Emergency Social Network Jan 2022 - Apr 2022** *A cloud-based web application providing platform for real-time communication and emergency sheltering information*

* Built a REST-compliant application using Expressand MongoDB. Led agile sprints to ensure weekly releases
* Designed a framework-less, responsive interface with cross-browser compatibility and dynamic content updating
* Automated CI/CD pipeline and end-to-end testing with **88%** code coverage using Jest and CircleCI

**Distributed Web Crawler Management Framework Sep 2021 - Nov 2021** *A web application for configuring, deploying and monitoring distributed web crawlers in one-stop*

* Designed RESTful APIs using Django for deploying crawler project from local machine to cloud
* Visualized crawler status and crawled data using reusable and interactive front-end components implemented with Vue3
* Established a library in Python to generate and customize multi-threaded web crawlers from templates
* Obtained **1 million** images from multiple websites with **one quarter** of scheduled data collection time