**Zixuan (Amos) Chen**

[zixuanchen1999@gmail.com](mailto:zixuanchen1999@gmail.com) | (949) 910-6482 | Palo Alto, CA

LinkedIn: [amoschenzixuan](https://www.linkedin.com/in/amoschenzixuan/) | GitHub: [AmosChenZixuan](https://github.com/AmosChenZixuan)

**EDUCATION**

**Carnegie Mellon University Mountain View, CA**

Master of Science in Software Engineering **Jan 2022 - May 2023 (Expected)**

Relevant Courses: Software Engineering, Computer System, Data Science,Verification and Testing

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

Bachelor of Science in Computer Science; Cumulative GPA: 3.96/4.0 **Sep 2017 - Dec 2020**

Relevant Courses:Algorithms, Data Structure, Data Management, Information Retrieval, Machine Learning

**SKILLS**

**Languages:** Python (Proficient), C/C++ (Familiar), Java (Familiar), JavaScript (Familiar), CUDA (Prior Experience)

**Technologies:** PyTorch, Node.js, Express.js, Vue.js, MySQL, MongoDB, Django, Git, JUnit, Mockito, AWS, GCP

**WORK EXPERIENCE**

**Carnegie Mellon CyLab Pittsburgh, PA**

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

* Deployed deep learning based vulnerability detection architecture on GCP and achieved **99% accuracy** on JavaScript function dataset
* Increased **19%** of model performance through hyper-parameter tuning and variable obfuscation
* Streamlined architecture installation process by developing and deploying a cross-platform training pipeline; restructured project dependency to achieve 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 simulating garments in C++/CUDA
* Implemented **4 new features** (fluid, smoke, air-inflation effects, and two-way coupling) for a position-based particle solver, introducing more complex interactions in cloth simulation
* Optimized simulator to reduce data duplication by **50%** through a unified particle model, maintaining a minimum of **60 fps** when simulating millions of particles simultaneously

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

* Developed a deep learning based human body measurement application for a custom clothing service using PyTorch; trained through semi-supervised learning, tested with real users’ photos, and improved categorization precision by **11%**

**PROJECTS**

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

* Led a team of 3 engineers to build a REST-compliant application utilizing Node, Expressand MongoDB
* 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 to safeguard incremental development process

**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 with Django for cloud platforms to easily deploy crawler projects from local machines
* Visualized crawler status and crawled data using reusable and interactive front-end components implemented with Vue3
* Established a template library in Python to generate and customize multi-threaded web crawlers
* Acquired **1 million** images from multiple websites with **one quarter** of scheduled data collection time

**Fabflix.com Apr 2020 - Jun 2020**

*An e-Commerce platform for movies*

* Built a scalable and reliable web service with Java and MySQL and hosted on AWS
* Reduced response time from **300ms** to **100ms** through Master-Slave replication and connection pooling
* Created an Android application to support complex CRUD operations and a complete experience for mobile users