

# Apple Sun

Pittsburgh, PA | (412) 320 9974 | [zhuofans@andrew.cmu.edu](mailto:zhuofans@andrew.cmu.edu) | [Linkedin](#) | [Personal Website](#) | **2025 Full-Time**

## Education

### Carnegie Mellon University

Master of Engineering in Mobile and Internet of Things (3.8/4.0)

Pittsburgh, PA

August 2023 - March 2025

### Beijing University of Technology

Bachelor of Engineering in Internet of Things(3.8/4.2)

Beijing, China

September 2019 - June 2023

## Experience

### Carnegie Mellon University, HCII- C&C Lab

May 2024 - Present

**Research Assistant** | AI-Assisted Social Coding

Pittsburgh

- Utilized **Empirica** for social coding experiment, integrating **Node.js** and **Python** to connect frontend and backend. Incorporated ChatGPT API for dynamic code generation.
- Developed a responsive design using **React**, implementing dynamic UI components (navigation, modals, online compiler). Managed state and user input through React hooks to optimize game logic and enhance user experience.

### TikTok

July 2022 - January 2023

**Software Engineer Intern** | AI-Lab Robotics: E-commerce & Inventory

Beijing

- Agile development and maintenance front-end across 3 platform using **React+React Native+TypeScript**, managed state with **Redux**. Implemented **3+features** (Order Merging, Time Estimation, Voice Interaction System, etc.), collectively improved punctuality rates by **30%** and eliminated manual interventions.
- Standardized mailroom operations by integrating a **MySQL** database, employing **Django ORM** and **RESTful APIs** for backend integration, boosting daily delivery capacity from **100 to 2,700**.
- Designed and implemented a RGB-D vSLAM based elevator control process with two modes, reducing manual interventions by **75%**. Used **Python** for real-time integration with **ROS APIs**.
- Led **A/B test** on conversion rates and collaborate with PM to conduct user research. Managed the Meego platform, overseeing releases and coordination.

### WULA

May 2019 - Present

**Software Engineer & Design** | Social App Startup

Remote

- Spearheaded the design and development of a social app, using **Taro** to publish on **Android, iOS, and Web (H5)**. Implement responsive design, successfully launched the product in **17 countries**, attracting over **8,000 active users**.
- Developed reusable **Vue Native** components, integrated **RESTful APIs** with **Flask** backend, utilizing **PostgreSQL** for data storage. Optimized performance using **Kubernetes** for load balancing during predicted peak times.
- Leveraged proficiency in **prototyping** and **UI/UX** design using **Figma & Adobe AE**.

## Project

### Weather App with Swift | SWIFT challenge

- Developed a Weather App using **SwiftUI**, leveraging the **OpenWeatherMap API** for live data and employing **Combine** for streamlined data handling. Crafted a responsive UI, integrated unit switching with **AppStorage**.

### Volkswagen Digital Twins| VWGoA Practicum Capstone

- Built a **Digital Twin IDE** with **Node.js, Python, React**, and **RESTful APIs**, aiming to cut iteration time by **30%** and speeding up feature deployment. Reduced costs and boosted efficiency using **AWS CodePipeline**.
- Automated microservices with **Docker** and **Kubernetes**, cutting setup time by **60%**.

### Global Game Jam 2024 | Large but not in Charge, BunnyBall, Sun Wukong and NeZha

- Developed **3D games** using **Unity** and **C#**, including **Platformer, Action RPG, Shooter** with controller support.
- Implemented **complex enemy AI, attack patterns**, and **collision detection**. Hand-drew isometric assets and used **Adobe 3D Painter** for texture creation to enhance visual quality.
- Built engaging UI and interaction logic for each game using **Figma** and **Unity UI**, such as dynamic in-game HUDs, etc.

### Santorini: Online Board Game

- Designed in UML and implemented in Java with software design principles for an extensible game architecture
- Developed an interactive user interface using **TypeScript** and **React.js** for multi-user shared gameplay
- Set up **CI/CD** pipeline on GitHub Actions for automated testing, ensuring code quality by **95%** branch coverage

## Skills

**Languages:**Java, Python, JavaScript/TypeScript, Swift, Dart, Objective-C, C++, C, SQL, HTML/CSS

**Technologies/Frameworks:** React, Redux, Vue.js, Angular, SwiftUI, Flutter, SpringBoot, Django, Flask, Node.js, MongoDB, PostgreSQL, AWS (S3, Lambda, EC2), Heroku, Kubernetes, Docker, Git, Maven, JUnit, Figma, Unity

**Media & Document Processing:** Adobe Illustrator, Adobe Photoshop, Adobe InDesign, Rhino