Apple Sun

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https://sunzhuofan-apple.github.io/Portfolio/

Education

Carnegie Mellon University <div align="right">**Pittsburgh, PA**</div>
Master of Engineering in Mobile and Internet of Things (3.8/4.0) <div align="right">*August 2023 - March 2025*</div>

Beijing University of Technology <div align="right">**Beijing, China**</div>
Bachelor of Engineering in Internet of Things(3.8/4.2) <div align="right">*September 2019 - June 2023*</div>

Internship Experience

Carnegie Mellon University, HCII- C&C Lab <div align="right">**May 2024 - Present**</div>
Research Assistant, AI-Assisted Social Coding <div align="right">*Pittsburgh*</div>
- Utilized the **Empirica** framework for multi-user social experiments, integrating frontend and backend with **Node.js** and **Python**. Optimized the backend using **RESTful APIs** to ensure efficient data synchronization.
- Developed the **Responsive Design**, using **React** to implement dynamic components, managing game logic and user input to enhance the fluidity and interactivity of the user experience.

TikTok <div align="right">**July 2022 - January 2023**</div>
Software Engineer Intern, AI-Lab Robotics: E-commerce & Inventory <div align="right">*Beijing*</div>
- Agile development and maintenance front-end across 3 platform using **React+React Native+TypeScript**, managed state with **Redux**, and utilized **Figma** for design prototyping. Implemented **3+features** 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.**
- Led A/B test on conversion rates and conducted user research to refine product features. Managed the Meego platform, overseeing releases and coordination.

WULA <div align="right">**May 2019 - Present**</div>
Software Engineer & Design, Social App Starup <div align="right">*Remote*</div>
- Spearheaded the design and development of a social app for college students to connect with alumni, using **Taro** to streamline multi-platform deployment across **Android**, **iOS**, and **Web (H5)**. Developed reusable **Vue Native** components, integrated **RESTful APIs** with a **Flask** backend, and **PostgreSQL** for data storage.
- Leveraged proficiency in **prototyping** and **UI/UX** design using **Figma** & **Adobe AE**. Implement responsive design, successfully launched the product in **17 countries**, attracting over **8,000 active users**.

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 CI/CD**.
- 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, SwiftUI, Objective-C, C++, HTML/CSS, SQL, C#
Technologies/Frameworks: React, Redux, Spring, Vue.js, Node.js, Flask, AWS, Git, Unity, Django, MongoDB, PostgreSQL, Angular, Maven, JUnit, Heroku, Kubernetes, Docker, Figma
Media & Document Processing: Adobe Illustrator, Adobe Photoshop, Adobe InDesign, Rhino