

Jarrett Mao

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SUMMARY

Software Engineer | Full-Stack & Game Development

Full-stack engineer with experience building web applications, RESTful APIs, and interactive systems in fast-paced, cross-functional Agile environments. Strong communicator known for collaborative problem-solving and a growth-oriented mindset, committed to delivering thoughtful, user-focused solutions.

TECHNICAL SKILLS

C# | **TypeScript** | **JavaScript** | **Python** | **Java** | **C++** | **Unity** | **Git** | **React** | **HTML** | **CSS** | **Node.js** | **.NET** | **MongoDB** | **PostgreSQL**

WORK EXPERIENCE

Playtoon IT — Full Stack & Game Developer Intern Sep 2025 - Current

- Implement UI and back-end systems for a web app that helps users create interactive stories with branching narratives
- Build front-end and back-end features for a Unity-based multiplayer racing prototype
- Collaborate with designers and engineers to improve overall user experience

Kwan Wo Ironworks — IT Support & Web Developer Jun 2023 - Current

- Administer the company WordPress site, while building a modern web app with a user-friendly interface for non-technical staff to showcase past construction projects
- Manage hardware setup and software troubleshooting for 30 employees in English, Cantonese, and Mandarin
- Lead a team of three to increase operational efficiency through documentation, training, and recurring check-ins
- Build and maintain internal servers and Excel-based systems for employee accounts and security access
- Present compliance and financial reports to AISC auditors

Theta Studios — Software Engineer Aug 2023 - Dec 2024

- Developed and integrated multiplayer gameplay and UI systems for *Smash and Stab*, a 4–8 player social deception game
- Contributed to networking implementation, synchronized player state, limited field-of-view, and item systems
- Mentored two interns on Git workflows, pull request reviews, and Unity basics
- Partnered with designers and artists in a 9-person cross-disciplinary team to deliver products on schedule

CodeFu — Coding Instructor Oct 2022 - Aug 2023

- Taught object-oriented programming fundamentals to elementary school students
 - Adapted curriculum to diverse skill levels to foster a safe and creative learning environment
 - Built strong one-on-one connections with students and facilitated conflict resolution
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PROJECTS

Hot Foetato: Unity, Typescript, WebSockets, React | <https://github.com/Jarrettsmao/Hot-Foetato> 2025

- Engineered a server-authoritative multiplayer game with real-time state synchronization and room lifecycle management
- Implemented WebSocket-based messaging protocol for gameplay events, lobby updates, and player reconnection handling
- Built modular Unity UI systems driven by network events to maintain consistent client-side state across multiple instances

Grunt: C#, JS/CSS/HTML, MongoDB, .NET | <https://github.com/Jarrettsmao/Grunt> 2025

- Built a full-stack web app for submitting doodle-based food reviews along with AI-translated “caveman speech”
- Devised JWT-based authentication for secure account and session management
- Integrated Google Maps API for restaurant search and discovery
- Connected a .NET backend with a MongoDB database to persist user accounts and reviews

Underwater Temple: Unity | <https://github.com/hmAAMh/CMPM121-Final> 2023

- Designed and developed a 3D underwater exploration game
 - Created custom hieroglyph assets in Blender and integrated dynamic lighting and particle effects
 - Implemented smooth camera controls and trigger systems using vector math and spatial detection
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LEADERSHIP

UCSC Chinese Student Association — Co-President and Banquet Coordinator 2020 - 2023

- Led planning and execution for programs serving 200+ members, balancing timelines and resources
 - Managed a 10-person leadership team, emphasizing communication, two-way feedback, and collective growth
 - Authored and presented proposals to sponsors, raising \$5,000+ funds
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EDUCATION

University of California, Santa Cruz — Computer Science Game Design B.S.

LANGUAGES

English (Native) | Cantonese (Native) | Mandarin (Fluent)