

Zachary Ruiz

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EDUCATION

University of California, Riverside

Bachelor of Science in Computer Engineering

Riverside, California

Sep. 2021 – Mar. 2024

EXPERIENCE

Software Engineer Intern

Brain Game Center

Riverside, California

August 2022 – June 2023

- Developed C# eye tracking tools for cognitive research, utilizing the Tobii Pro SDK and Meta Quest Pro SDK, as well as JSON Lite scripts for streamlined data logging.
- Innovated the creation of JSON logging scripts tailored for research data analysis, employing C# and JSON Lite to ensure efficient and structured data logging processes.

Research Assistant

University of California, Riverside

Riverside, California

August 2023 – December 2023

- Spearheaded the transition of an established codebase from .ejs to a React project structure for a pioneering research initiative studying adaptive learning, enhancing scalability and maintainability.
- Orchestrated the development and upkeep of API routes utilizing Express.js, ensuring seamless data transmission and optimal performance for web applications.

PROJECTS

Bored Ape Escape | *PostgreSQL, ExpressJS, ReactJS, NodeJS*

- Collaborated in an agile team to engineer a dynamic full-stack ecommerce platform, leveraging PostgreSQL, ExpressJS, ReactJS, and NodeJS.
- Spearheaded REST API development with seamless integration of Stripe API for secure payment processing.

Fitness Buddy | *MongoDB, ExpressJS, ReactJS, NodeJS*

- Designed a comprehensive fitness tracking application serving a REST API with express.js, and a React front end.
- Implemented robust user authorization through JSON Web Tokens, empowering users with personalized fitness insights and tracking capabilities.

Procedural Generation Suite | *Unity3D, C#*

- Harnessed Unity3D and C# to engineer advanced procedural content generation algorithms.
- Engineered a high-performance Simplex Noise image generator utilizing Unity's burst compiled jobs system, alongside creating dynamic island generation scripts for immersive world-building experiences.
- Developed robust and performant bilateral filter algorithms to enhance procedural image generation.

TECHNICAL SKILLS

Languages: C++, C#, Javascript, HTML / CSS, SQL, PostgreSQL, MongoDB, Python

Frameworks: React, Node.js, Express.js, Unity3D, PostgreSQL, Next.js, Typescript, Django

Tools: Git, Postman