Jacob Perez

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EDUCATION

University of California Riverside   Riverside, CA
Bachelors in Computer Science, GPA: 3.46/4.0   Sept. 2022 – June 2026 (Expected)

WORK EXPERIENCE

Software Engineer - Student Position   Aug 2024 – Present
Association for Computing Machinery (ACM) at UCR   *Riverside, CA*
- Engineered a portal for **100+ monthly applications**, streamlining ACM's application process for UCR students
- Integrated **RESTful APIs** between **Typescript** client & **Node.js** backend, boosting data reliability by **40%**
- Developed responsive **React.Js/TailwindCSS** webpages, increasing application rates by **20%** each month
- Optimized **API endpoints**, reducing errors for **100+ students** and improving system stability

PROJECTS

AutoDev | *Python, JavaScript, Chrome Extension API, GitHub API, OpenAI (Ada-002)*   May 2025 – July 2025
- Developed a **Chrome extension** code assistant allowing **instant Q&A** over **GitHub repositories**
- Processed **1,000+** code files using semantic vector search with **OpenAI ada-002** embeddings and **ChromaDB**
- Integrated **GitHub REST API** to dynamically fetch, embed, and query public repositories in real-time
- Engineered full-stack system with **Flask backend** to serve vector search and **LLM-powered responses**

Food Delivery Application | *React.Js, Node.Js, Express.js, MongoDB*   November 2024
- Leveraged **MongoDB** for advanced **JSON queries**, improving operational continuity by **35%**
- Optimized backend APIs using **Thunder Client**, resolving **10+** API errors, improving app reliability
- Integrated **Stripe API System** which processed transactions in **under 2 seconds**
- Implemented responsive, reusable **React.js components**, enhancing **cross-device compatibility**

IMDB Movie Recommender | *C++, Git, GoogleTest, Valgrind, CMake*   May 2024
- **Led a team of 3** using Scrum/Agile methodology, accelerating projected development time by **20%**
- Utilized **Valgrind & GDB** to ensure **0 memory leaks**, optimizing low-level memory management
- Reached **85%** code unit test coverage through **GoogleTest** framework, **validating robustness** and reliability

Script - Book Rater | *React.Js, Node.Js, Express.js, MongoDB*   February 2024
- Integrated the **Open Library API** for a plethora of book information, on **50,000+ titles**
- Designed a **responsive React interface** with advanced state management, reducing page load time by **25%**.
- Optimized **MongoDB queries**, decreasing data retrieval time by **30%**

Graph Based Pathfinding Visualizer | *Python, NumPy, Pygame*   Jan 2024
- Processed **500+ pathfinding** scenarios, achieving **98% accuracy**
- Developed a real-time visual interface with PyGame, helping students visualize real calculations

TECHNICAL SKILLS

Languages: Javascript, Python, C, C++, SQL (Postgres), Typescript, x86, HTML/CSS, Rust
Frameworks: React.Js, Next.js, Node.js, Express.Js, Tailwind, GoogleTest, Valgrind, Redux
Developer Tools/Other: Git, CMake, Visual Studio, PyGame, ChromaDB, MongoDB, Linux, GitHub, Figma
Relevant Coursework: Operating Systems, Compiler Design, Data Structures and Algorithms, Object Oriented Programming, Software Developer/Engineer Practices, Computer Architecture, Linear Algebra, Advanced Statistics