Tarj Mecwan

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EDUCATION

California Polytechnic State School, San Luis Obispo — San Luis Obispo, CA
Bachelor of Science in Computer Science — *Sept 2021 – June 2025*

EXPERIENCE

Software Engineer Intern — June 2024 – Present
Altura — *Seattle, WA*
- Created REST APIs for NFT market functionalities, including authentication, listings, and transaction processing
- Integrated external APIs for fetching and displaying NFT metadata and pricing info for 2000+ offerings

Teaching Assistant — Sept 2023 – Present
California Polytechnic State School, San Luis Obispo — *San Luis Obispo, CA*
- Taught 225 students taking Systems Programming, Computer Security, Calculus I-IV, Linear Algebra
- Led discussions, taught lectures, provided individualized student support, and coordinated logistics with professors

Software Engineer Intern — June 2023 – Sept 2023
Altura — *Seattle, WA*
- Redesigned application logging system by implementing encryption algorithms and real-time monitoring tools, resulting in a 40% increase in security compliance and 30% faster data packet decoding
- Developed a web app hosting online marketplace auctions and performed analytics on the collected data
- Led successful integration of NFT marketplace across diverse gaming communities, resulting in a 25% increase in user engagement and a 15% increase in revenue, amounting to an additional $500,000 in quarterly earnings

Software Engineer Intern — June 2022 – Sept 2022
NYX Inc. — *Livonia, MI*
- Designed and developed a commenting-based discussion feature on the task review form, eliminating dependence on an external tools, which saved $10k annually in fees, reduced resolution time by 20%, and improved communication
- Defined new RPC actions and protocol buffers to handle stubby calls from angular components and service actions in the front-end by deploying a client service to modify an SQL database
- Enhanced the Embark front-end testing infrastructure by adding custom selector-definition support in screenshot comparisons, resulting in a 25% increase in developer velocity and reduced maintenance time by 30%

Software Engineer Intern — June 2021 – Sept 2021
Altura — *Seattle, WA*
- Reduced engineers' investigation time from several days to 1 minute by building a PHP framework and React UI that automates a 25-step manual process for identifying 50 possible root causes of a demonetized video
- Optimized 3 APIs called 15K times per second by refactoring and removing dead code

PROJECTS

Pathfinding Visualizer | *Python, Flask, React, PostgreSQL, Docker* — August 2023
- Developed a path-finding visualizer project incorporating prominent algorithms, including Dijkstra's algorithm, A* algorithm, and breadth-first search (BFS), to simulate and visualize optimal routes in real-time
- Implemented interactive features, allowing users to set obstacles, adjust visualization speed, and manipulate start/end points, enhancing user experience and demonstrating proficiency in user interface design and interactivity
- Used Python, Pygame, and Matplotlib to develop an interactive data visualization tool that allows users to manipulate datasets in real-time and generate dynamic charts, improving data analysis efficiency by 40%

PolyBites | *Python, JavaScript, CSS, HTML* — May 2024
- Designed and implemented a campus food review web app using JavaScript, CSS, and HTML
- Integrated user authentication, account creation, and review posting for a seamless user experience
- Configured backend with Node.js and MongoDB for secure data storage and retrieval
- Implemented environment variables for database connection and token security, following secure dev practices

TECHNICAL SKILLS

Languages: Java, Python, SQL/SQLite, JavaScript, HTML/CSS, Scheme, C++, SystemVerilog, Processing
Technologies: Git, Apache Spark, AWS, Regex, Jupyter Notebook, ReactJS, Flask, scikit-learn, Plotly, Dash, Matplotlib