Parker Williams

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Education

California Baptist University Riverside, CA
Bachelor of Science in Computer Science, Minor in Applied Statistics *Exp. Graduation April 2026*

Technical Skills

Languages: JavaScript, Python, R, C++, Java, SQL, HTML/CSS
Developer Tools: Git, AWS, VS Code, PyCharm, IntelliJ, Jupyter Notebook, R-Studio
Libraries/Frameworks: Tensorflow, Sci-Kit Learn, Pandas, NumPy, Matplotlib, React.Js

Experience

Student Researcher February 2024 – Present
California Baptist University - Engineering Department

- Developed **Python** scripts for 3D coordinate manipulation, text file parsing, and generation to facilitate research on **Pelvic Organ Prolapse Surgery**.
- Facilitated the transition of Finite Element Model (FEM) simulations from Abaqus to FEBio software, improving computation time by 50%.
- Refined and optimized **Sequential Machine Learning** model using the **Keras API**, training it with over 10,000+ simulations to enhance accuracy predicting tissue properties.
- Co-authoring a Methods **Research Paper** on the application of machine learning for inverse finite element analysis (FEA).

Undergraduate Student Worker February 2024 – Present
California Baptist University - Engineering Department

- Developed **R** scripts for instance of Concerto, a CAT (Computer-Aided Testing) software hosted on **AWS**, enhancing its functionality for use in class grading by Dr. Gordon.
- Implemented **SQL** tables to efficiently store and visualize student test performance data, enhancing data management capabilities.
- Collaborated closely with Dr. Gordon throughout the entire development cycle to ensure alignment with project objectives and achieve desired outcomes.

Projects

Better Blackboard Learn | **200+ Users** | *Product* | *Source Code*

- Developed Chrome Extension using **JavaScript** providing Students full user customization of Class Images, Names, and Themes for Blackboard Learn. Compatible with **100+ Universities** across the world.
- Utilized Blackboard Learn Open API and Google Storage API to query user information and save settings.
- **Achieved 200+ Active Users** and **all 5 Stars Reviews**.

Stock Market Prediction, Machine Learning | *Source Code*

- Engineered a machine learning model using Sci-Kit Learn's Random Forest to predict S&P 500 stock prices.
- Designed a back-testing engine, enhancing model accuracy by 12% through the use of historical market trends.
- Analyzed 30 years of S&P 500 data to understand market trends.

Campus Involvement

ACM-ICPC Competitive Programming Team September 2023 – Present

- Competed in international collegiate programming competition, ACM-ICPC.
- Orchestrated collaborative problem-solving efforts as Lead Programmer in a team of 4.

NCCDC Competitive Cyber Defense Team September 2023 – Present

- Participant in National Collegiate Cyber Defense Competition representing CBU.
- Collaborated with a team to protect and secure network infrastructure and systems.