# Brian Jing

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## Education

**University of California, San Diego** August 2024 - June 2027

*Bachelor of Science - BS, Data Science*

**Relevant Coursework:** Data Structures, Data Science Algorithms, Data Management, Data Visualization
**Organizations:** Data Science Student Society (AI Projects Team), Eclipse Analytics (Project Manager)

## Experience

**Founder, AI Engineer** August 2024 - Present

*POWERCOACH - Real-Time Powerlifting Form Correction App* *Irvine, CA*

- Engineering a **two-branch TensorFlow neural network pipeline** utilizing **4-frame spatiotemporal windows** to simultaneously classify lift phases and form faults across 15 common barbell exercises
- Built and established **WebSocket communication** between a Flask-SocketIO backend and Swift client, delivering real-time audiovisual feedback with <30ms latency through JPEG compression and payload minimization
- Trained a custom barbell detection model on over 15,000 scraped images using Google's **MediaPipe object detection API**, achieving an average true bounding box overlap of 0.5 on individual frames

**ML Project Manager** October 2025 - December 2025

*Eclipse Analytics* *Irvine, CA / La Jolla, CA*

- Led a team of 3 sports analysts to build a **PCA + Ridge Regression** stacking ensemble that reduced 30+ NBA game features to 1 final "clutchness" score for 700+ modern NBA players, while retaining 82% total variance
- Engineered a "game_changer" meta-feature used in PCA that evaluated a player's influence on winning odds in clutch time, by aggregating clutch-time usage rates, scoring impact, and performance under pressure
- Fostered a passionate team culture by prioritizing curiosity-driven research, delegating tasks based on members' basketball interests to drive a 150% **acceleration in project completion time** against the original schedule

**Data Science Lead** July 2023 - April 2024

*Ignited Minds Nonprofit* *Irvine, CA*

- Designed and taught the first data science programs for **11 Malawian high schools** remotely
- Enhanced teaching methods based on class participation levels, fostering engaging learning environments that developed students' interest and expertise in data science
- Published monthly online blogs on real-world data science topics to **over 1,000 global readers**

## Projects

**BFRB Gesture Classifier** June 2025 - September 2025

- Engineered an **XGBoost + PyTorch** neural network pipeline to classify body-focused repetitive behaviors (BFRB) based on wrist-worn sensor data, improving testing F1 score by ∼40% using **5-fold cross validation**
- Performed multivariate imputation on over 30,000 missing data entries within a 500,000-entry dataset using **scikit-learn**, optimizing imputation hyperparameters with **Bayesian optimization**
- Boosted model training efficiency while maintaining classification accuracy by reducing 300 of the dataset's redundant raw sensor variables to 25 extracted statistical features

**X-Ray Tuberculosis Detector** June 2024 - July 2024

- Trained a **Keras convolutional neural network** to diagnose tuberculosis in over 4,200 chest X-rays, achieving a **98% testing accuracy** with Adam optimization and ReduceLROnPlateau
- Published as a notebook to Kaggle, calling on over 2,000 viewers to optimize the model and explore computer vision innovations in healthcare

## Skills

**Deep Learning & Modeling:** CNNs, PyTorch, Tensorflow/Keras, Scikit-learn, XGBoost, Random Forest
**Data Visualization & Preprocessing:** Seaborn, R, Pandas, NumPy, OpenCV, Class Balancing, Data Imputation
**App Development Technologies:** AWS (RDS, ELB, ECS), Flask Framework, WebSockets, Swift, PostgreSQL