

# Prajwal Mohan

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## EDUCATION

### Arizona State University

*Masters in Biomedical Engineering: GPA - 3.81*

Tempe, AZ

*Jan. 2024 – Dec 2025*

### RV College of Engineering

*Bachelors in Biotechnology : CGPA - 7.62*

Bengaluru, India

*Aug. 2018 – May 2022*

## TECHNICAL SKILLS

**Software Proficiency:** Python, Matlab, Autocad, Tableau, MS Office, Git, VS Code, Vercel

**Data and Analytics:** Statistical Analysis, Predictive Modeling, Data Analysis

**Quality Assurance Skills:** Quality Management Systems (QMS), Root Cause Analysis, Supplier Compliance

**Libraries:** pandas, NumPy, Matplotlib, Scikit-learn

## CERTIFICATIONS

**Human Research (IRB - Biomedical Research)**

*CITI Program, May 2025 - May 2029*

**Clinical Trial Billing Compliance (CTBC)**

*CITI Program, May 2025 - May 2028*

**Spark Challenge: AI Architect**

*ASU Enterprise Technology, Jul 2025*

**Spark Challenge: Coding**

*ASU Enterprise Technology, Jul 2025*

**Spark Challenge: Project Management**

*ASU Enterprise Technology, Jul 2025*

**Spark Challenge: Presentation Design**

*ASU Enterprise Technology, Jul 2025*

## EXPERIENCE

### Data Scientist

Sep. 2022 – March 2023

*TuringMinds.ai*

*Bangalore, India*

- Conducted exploratory analysis on datasets exceeding 2 million records using SQL and Python libraries (Pandas, NumPy, Scikit-Learn, Matplotlib), reducing data processing time by approximately 35%.
- Implemented predictive analytics models, including random forest, KNN, SVM, and logistic regression, achieving an average accuracy increase of 15% over previous methods.
- Created detailed reports and visualizations to communicate findings to stakeholders.

## PROJECTS

### Simulated Brain MRI Phantom Analysis | Matlab, Image Processing toolbox

Jan 2024 – May 2024

- Created a digital brain-simulating phantom using MATLAB, incorporating 7 ellipses from the Modified Shepp-Logan phantom.
- Generated proton density (PD) and T2 maps with specified intensities, and used these to produce 10 noisy T2-weighted images.
- Applied voxel-wise curve fitting to estimate PD and T2 maps and compared the estimated maps with the original maps to evaluate accuracy.

### Design and Development of a EEG Device Prototype | Python, Tableau, Autocad

Jan 2024 – May 2024

- Designed and built a functional EEG headset prototype using Autocad for precise 3D modeling and mechanical design.
- Developed a Python-based algorithm integrated with a Raspberry Pi microcontroller to record, process, and analyze real-time EEG signals, achieving a confidence level greater than 90% for detecting user focus.

### Motor Cortex Activity Analysis Using Raster and PETH Plot | Matlab, Git

Jan 2025 – May 2025

- Analyzed neuronal activity from a 10x10 micro-electrode array implanted in a macaque monkey's motor cortex during various finger movement tasks.
- Implemented Raster and Peri-Event Time Histogram (PETH) plots to visualize time-aligned neural firing patterns in response to behavioral events.
- Applied neural decoding criteria to distinguish between individual and combined finger movements based on spiking activity.

## OTHER EXPERIENCE

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### **Research Aide-Data Analyst**

Jan 2025 – Present

*Decision Theater and ASU Health*

*Tempe, AZ*

- Extracted, cleaned, and merged statewide health datasets from diverse public sources such as the CDC and state government databases, ensuring accurate and consistent data for analysis.
- Conducted rigorous quality control checks on data inputs and analytic outputs, reducing errors and enhancing the reliability of health-impact assessments produced by ASU Health initiatives.
- Performed exploratory data analysis using Python libraries including pandas and NumPy to identify key health indicators influencing Arizona's health rankings.