PRANJAL PATEL

520-491-0909 | ppatel5196@sdsu.edu | linkedin.com/in/pranjal | github.com/pranjal | San Diego, CA (open to relocate)

EDUCATION

San Diego State University — *San Diego, CA*
Master of Science in Big Data Analytics — *Aug. 2024 – May. 2026*

California State University Northridge — *Northridge, CA*
Bachelor of Science in Information Systems and Business Analytics Minor - Honors — *Jan. 2020 – May. 2024*

Google Data Analytics Certificate — *Online*
Issued by Coursera — *Aug. 2022*

PROFESSIONAL EXPERIENCE

Research Assistant (Current Project: Homelessness Impact Analysis) — *Oct. 2024 – Present*
Human Dynamics in Mobile Age — *SDSU*

- Developed a self-annotation tool to manually label Google Street View images of San Diego, identifying homelessness encampments by drawing bounding boxes around tents. This labeled data is used to train the machine learning model to automatically detect 1000s of encampments with increasing accuracy.
- Enhanced deep learning model performance for encampment detection, improving accuracy by 15% through continuous integration of annotated data, making the process more efficient and automated.
- Contributing to interdisciplinary research on homelessness and health equity, combining computational social science, public health frameworks, and GeoAI methods to provide impactful policy recommendations and solutions.
- Analyzing the spatial and temporal patterns of homelessness, exploring its socio-environmental impacts using ArcGIS and geospatial techniques, generating actionable insights for urban policy and intervention strategies.

Graduate Assistant — *Oct. 2024 – Present*
Big Data Analytics Program — *SDSU*

- Collaborated with faculty to review and evaluate students' coursework in the Big Data Analytics program, ensuring alignment with learning outcomes and providing constructive feedback to enhance student performance.
- Assisted students in resolving technical queries related to tools and technologies such as AWS, Jupyter Notebook, Python, SQL, Tableau, Visual Studio, R, etc. fostering their understanding of data analytics concepts and hands-on skills essential for industry applications.

TECHNICAL SKILLS

Languages: Python, R, Java, C, C++, SQL, JavaScript, Julia, Rust
Framework and Databases: Angular, Snowflake, MySQL, MongoDB, Django, Flask, Spring Boot
Tools: Git, GitHub, Docker, RStudio, AWS console, VS Code, Jupyter Notebook, Zeppelin, PyCharm, Hive, Spark, HDFS
Analysis and Visualization Tools: Tableau, ArcGIS Pro, ArcGIS Insights, PowerBI, Highcharts, Gephi, QGIS
Libraries: Rshiny, Dplyr, Plotly, pandas, NumPy, seaborn, Matplotlib, scikit-learn, Dask

PROJECTS

EduDB: Personalized SQL Learning through Generative AI | MySQL, AWS, LLM, Python, Flask

- Developed EduDB, an interactive SQL learning platform for K-12 students, utilizing Python, Flask, and MySQL to create a user-friendly web interface and dynamic database schemas.
- Leveraged LLM APIs and Large Language Models (LLMs) to generate engaging, theme-based data and personalized SQL practice questions, enhancing student learning and understanding of relational databases.
- Integrated AWS for data storage and management, ensuring scalability, reliability, and real-time access to a rich dataset for seamless SQL practice and learning.

TrafficSenseAI | Python, scikit-learn, Flask, Highchart

- Built a predictive algorithm using Random Forest and DBSCAN on San Diego traffic and collision data to forecast accident severity (scale 0–3) based on inputs like weather conditions and location.
- Deployed the model on a Flask-based local website, enabling users to interactively select map points and input factors to get accident severity information, with Highcharts-powered visualizations to support traffic safety planning and policy optimization.

Instagram Influencer Score Analysis Model | Python, pandas, sikit-learn, seaborn

- Led a predictive modeling initiative to identify top-performing Instagram influencers using logistic regression and decision tree classification, developing data pipelines for cleaning, preprocessing, and conducting exploratory data analysis.
- Achieved high model accuracy and actionable insights by evaluating performance with precision metrics, such as AUROC and accuracy score, and visualizing key findings using pandas, scikit-learn, and seaborn.

VOLUNTEERING EXPERIENCE

- **Big Data Hackathon 2024, SDSU**: Guided participants, managed event flow, and resolved technical and procedural queries to ensure a smooth attendee experience.
- **Big Data Analytics Program Mixer 2024, SDSU**: Planned and facilitated a graduate mixer for first-year BDA students, coordinated event flow, led team-building activities, and hosted industry guest speakers to foster networking with faculty and professionals.