DHRUTHICK GOWDA MOHAN

dgmohan@ucsd.edu | +1 858-323-7769 | LinkedIn | GitHub

EDUCATION

UNIVERSITY OF CALIFORNIA, SAN DIEGO — **La Jolla, CA**
Master of Science - Computer Science, *GPA: 4.0* — *September 2022 - June 2024*

- Courses: Recommender Systems & Web Mining, Data Systems for ML, Search & Optimization

RAMAIAH INSTITUTE OF TECHNOLOGY — **Bangalore, India**
Bachelor of Engineering – Information Science, *GPA: 9.61* — *August 2017 - July 2021*

- Awarded "Silver Medal" for academic excellence in Information Science among 180 students.
- Courses: Data Mining, Computer Graphics, Image Processing, Databases, Computer Networks, Algorithms

EXPERIENCE

INDIA URBAN DATA EXCHANGE (IUDX) — **Bangalore, India**
Data Scientist — *August 2021 – June 2022*

- Worked with smart city data across various domains such as transit management, air quality, and emergency services to draw pertinent insights using efficient visualization techniques with the help of components that include Apache Spark, Flink, Kudu, Zeppelin, and Superset.
- Successfully developed a road network construction algorithm and used it to build and deploy a temporal graph convolutional network that tackles traffic modelling.
- Utilized various machine learning (regression, boosting, clustering, etc.) and deep learning algorithms (CNNs, LSTMs etc.), optimization routines and other mathematical and statistical approaches along with geospatial and NLP libraries (Uber's H3, Flair etc.) to solve problems such as traffic and air quality correlation analysis, and name-entity recognition.

INDIA URBAN DATA EXCHANGE (IUDX) — **Bangalore, India**
Data Science Intern — *March 2021 – July 2021*

- Worked on problems such as correlation analysis between air quality sensors, geospatial interpolation of air quality readings, multi-class classification of citizen grievances, and language translation (Gujarati to English).

SKILLS

- **Languages:** Python, Java, C, C++, SQL, Javascript, HTML
- **Frameworks:** TensorFlow, PyTorch, PySpark, SciKit, Pandas, Numpy

PUBLICATIONS

- Dhruthick Gowda M, Neralakatte Prajwal Pai, Anirudh R, Shruthi G, and Dr. Krishna Raj P M**, "**Brain Tumor Detection and Segmentation Using VGG16 and Mask R-CNN with Transfer Learning.", *Solid State Technology*, Volume 63, Issue 5, 2020 (pdf)

PROJECTS

- **Trend Detection in Stock Prices** (Machine Learning, LSTM, Time Series Forecasting): A web application that scrapes real time stock market data, detects the current trend (Uptrend/Downtrend) of a given stock and attempts to predict the next day's closing price. Random Forest and an LSTM, with data from India's NIFTY 50 market, were used to develop the detection and prediction model. *Tech: Python, Flask, TensorFlow, SciKit (June 2021)*
- **Brain Tumor Detection and Segmentation in MRI** (Image Processing, CNN)**:** Constructed a deep learning model that uses the VGG16 and Mask R-CNN architectures with transfer learning to detect the presence of tumors in MRI images and locates them through pixel-based segmentation. Classification accuracy of 90% and a mean average precision of 0.9 with an IoU score of 82% was achieved. *Tech: Python, TensorFlow, OpenCV (January 2020)*
- **Network Intrusion Detection** (Computer Networks, Machine Learning)**:** Built a machine learning model that detects malicious attacks in network traffic of a system and further classifies the type of attack. Various machine learning algorithms were tried before arriving at a Random Forest based model that gave an accuracy of 98%. *Tech: Python, SciKit, SciPy (July 2020)*
- **Data Analysis and Data Visualization of Road Accidents in USA** (Data Science, Unsupervised Learning)**:** Analysis of road accident data collected in the USA using various tools in Data Science. *Tech: Python, SciKit, SciPy (January 2021)*
- **Student Results Storage** (Databases, Java, SQL)**:** A web application that allows the user to login and update the grades obtained in every course over the duration of their study in a particular branch. Java Server Pages and JDBC with MySQL were used. *Tech: SQL, Java, JDBC (March 2020)*

VOLUNTEER EXPERIENCE

- **Backend Developer at DigitalJeevi**: Worked on building a back-end API for a web application with a database, using NodeJS and MongoDB, as part of their platform that helps a user create and take surveys.