Jayesh Parsnani

• Address: 904 Greek Row Drive, Arlington, TX 76013 • Email: parsnani72@gmail.com • Phone: (682) 554-8157
• LinkedIn • Portfolio

EDUCATION

The University of Texas at Arlington — Arlington, TX
Master of Science, Major in Computer Science — **GPA 3.8/4.0** — Aug 2021 - May 2023

Vivekanand Education Society's Institute of Technology — Mumbai, India
Bachelor of Engineering, Major in Information Technology — **GPA 3.3/4.0** — Aug 2017 - June 2021

WORK EXPERIENCE

Graduate Teaching Assistant — January 2023 – Present
The University of Texas at Arlington — Arlington, TX

- Aided Data Mining professor in overseeing a class of **38 students**, including organizing, administering, and evaluating student's homework and exams.
- Helped 12students in resolving their questions regarding their assignments or coursework which helped them to score in their assignments and exams.

Graduate Research Assistant — February 2022 – May 2022
Raid Labs (Department of Research) — Arlington, TX

- Co-ordinated, Collaborative work with team of 2 and a Ph.D. professor guided by Dr. ERICK C. JONES on an AI technology project funded by NSF.
- Refined a deep learning object detection model (**Single shot detector)** that can detect pill confirmation with an accuracy ranging between **80 to 95%.**
- Blended Technologies used are Python, **MobilenetV1-SSD** for integrating model in mobile devices and LabelImg for labelling the image dataset.
- Published research paper in International Supply Chain Technology Journal detailing the successful development of the deep learning model.

Software Developer (**Intern**) — June 2019 – Aug 2019
Trivia Software — Thane, India

- Exposed to the various Java SE 8 related technologies and implemented Management System Design application using MySQL, and Java Hierarchies.
- Managed and applied Create, Read, Update and Delete (CRUD) operations in parallel for employee records over **1000+** employees within organization.
- Programmed and integrated a new **functionality** which triggered a pop-up tune whenever a record was eliminated through the deletion operation.

SKILLS

- **Programming Languages:** Python | Java | C | R.
- **Tools and Frameworks:** Flask | Nodejs | Spring Boot | PHP | IOT | GitHub | TensorFlow | JSP | JDBC | Oracle | Docker | Postgres | Eclipse.
- **Cloud Technology and Database:** AWS (EC2) | Azure (Redis, Azure Data Studio) | MS MySQL | NoSQL | MongoDB | Cassandra.
- **Web Technology:** HTML&CSS | Bootstrap | Ajax | React | JavaScript | JSON | Node.js | Vue.js | jQuery | REST API | WebSocket.
- **Data Mining:** Math and Statistics | Google Collab | R programming | Data Cleaning, Data Modelling and analysis and Data Visualization

ACADEMIC PROJECTS

Cloud Computing

- Designed a web application using Python and Flask Framework that allows users to fetch **10000+** data from Azure Database using SQL queries and view earthquake data from the last 30 days, search for earthquakes within a specific magnitude range, locate earthquakes within their current radius.
- Optimized the application's performance by implementing caching using Azure Redis, resulting in a **50% reduction** in response time (from 8 seconds to 4 seconds) and deployment of the application onto the browser through Azure app services.
- Implemented data visualization techniques using D3.js to display search results in a graphical format (Bar or Pie chart, Scatter plot) within the browser.

Machine learning: Gender Prediction using Body Measurements

- Created a machine learning model to predict the gender of an individual considering various physical measurements such as Height, Weight and Age.
- Performed data cleaning and preprocessing on the raw dataset utilizing Python's built-in string manipulation and the data handling functions.
- Developed a **K-Nearest Neighbors** (KNN) model from scratch, trained the model and achieved an accuracy of **75%** on a test set of **1,000** samples.

Diet Recommendation System for Diabetic Patients

- Conceptualized personalized diet and exercise schedule by using the AI algorithms like K-means and Decision tree classifier model in the application.
- Developed a **K-means** algorithm to generate diet plans based on an individual's health information which has **93%** accuracy rate and delivered the plans in **30 seconds**, which is faster than the previous algorithm BIRCH, which took approximately **6 minutes** to do the same task.
- Designed **Decision Tree Classifier** algorithm for generating Exercise-Plan as per the individual health details which achieved an accuracy rate of **87.9%** and runtime of **40 seconds** which was faster and outperformed other algorithms that were tested on rapid miner tool.
- Published research paper in International Journal of Engineering Research and Applications describing an effective creation of the implemented models.

Car Parking System

- Orchestrated an entire process using **IoT-based Raspberry Pi** technology for users to park their vehicles efficiently and reducing parking time by **25%.**
- Developed an automated license plate recognition system that processed **100+** images daily, using camera modules and cutting-edge image processing techniques which extract text and store it in a SQL database; reduced manual data entry time by **80%** and increased processing speed by **50%.**
- Integrated a **robust security feature** using Twilio API which notifies users via text message in case their vehicle is relocated from the original parking location which is sensed by Ultrasonic sensor whether user car is parked or not.

CERTIFICATIONS

- Certification of completion (Google Analytics for Beginners)
- Participation in International E-Conference International Journal of Engineering Research and Applications **VESIT**