Anup Desai

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SUMMARY

A Graduate student at the North Carolina State University with two years of industry-proven software development experience. Proficient in object-oriented programming languages and fervently interested in machine learning and data science applications. An effective team player constantly seeking opportunities to push existing skill sets to new heights.

EDUCATION

- **North Carolina State University**   Raleigh, North Carolina
  Master of Science in Electrical and Computer Engineering   *August 2022 - May 2024 (Expected)*
  Courses: *Random Processes, Digital Imaging Systems, Design and Analysis of Algorithms*

- **JSS Science and Technology University**   Mysuru, India
  Bachelor of Engineering in Electronics and Communications; GPA: 8.13/10   *August 2016 - July 2020*
  Courses:: *Linear Algebra, Probability and Random Variables, Data Structures and Algorithms, Computer Networks, Operating Systems, Neural Networks.*

TECHNICAL SKILLS

- **Languages**: Python, C++, HTML, XML, CSS, JavaScript
- **Libraries**: OpenCV, Scikit-learn, Seaborn, NumPy, Matplotlib, jQuery
- **Data Processing**: MySQL, Pandas
- **Tools and Frameworks**: .NET, TensorFlow, Keras, TensorFlow Serving
- **Software Development**: Agile, Scrum, GitHub, Azure Services

WORK EXPERIENCE

- **Aurigo Software Technologies**   September 2020 - June 2022
  Software Engineer-1 (Full-Time)   *Bangalore, India*
  - **Web Application Development**: Developed highly interactive web applications for the City of Seattle, City and County of Denver on Aurigo Masterworks Cloud suite with intricate JavaScript validations and workflows.
  - **API for GIS Integration**: Spearheaded the design of APIs to integrate maps and GIS to interface with spatial layers, read and write data from the City and County of Denver's ArcGIS server, and increase efficiency by 25%.
  - **Workflow Design and Impact**: Accelerated business processes by incorporating workflows saving approximately 50-man hours.

- **Aurigo Software Technologies**   June 2020 - September 2020
  Solution Engineering Intern   *Bangalore, India*
  - **Web Application Development**: Contributed to the team working with Montana's Department of Transportation to develop interactive web pages with "Masterworks".
  - **Data Analysis and Visualization**: Customized detailed reports using SQL Server Reporting Services to enhance data visualization by 20%.

PROJECTS

- **CTE Detection and Image Segmentation using ResUnet++ (Python, TensorFlow.js, Keras, NumPy, Skimage)**:
  - Brain scans were segmented to look for CTE, a condition characterized by chronic brain degeneration and caused by recurrent head trauma.
  - Implemented ResUnet++, a state-of-the-art architecture for image segmentation with a "dice" coefficient of 81.33%.
  - Converted the model into TensorFlow.js format to make it compatible to run on any browser
- **Service Bot for Differently Abled (Python, TensorFlow, LSTM, SSD Algorithm, Robot Navigation)**:
  - Designed an autonomous service robot named "Dexter", capable of fetching objects via voice commands.
  - Trained the bot to recognize 6 different objects using SSD Object detection algorithm with an accuracy of 84%.
  - The Vector Field Histogram technique was used to navigate Dexter to the object of interest, following the shortest route
- **Customer Segmentation using K-means Clustering (Python, NumPy, Pandas, Matplotlib, Data Analysis)**:
  - Implemented K-means clustering Algorithm on a dataset of 350 customer samples to identify the segments.
  - Performed dimensionality reduction using Principal Component Analysis to focus on required metadata.
  - Accomplished segmentation of the dataset with 77.20 percent accuracy.

EXTRACURRICULAR

- **Volunteer**: Volunteered at PRAYAS-IEEE SJCE, an outreach program that aids in the education of impoverished children.
- **Volunteer**: Participated in Machine learning Workshop organized by Google on the University Campus (Aug 2019)
- **Sports**: Represented my state of "Karnataka" in the National Basketball Tournament organized by National Basketball Association of India.