Parth Kansara

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EDUCATION

Stony Brook University — Stony Brook, NY
Masters of Science in Computer Science — Expected: May 2024
Coursework: Computer Networks, Computer Vision, Human Computer Interaction [Fall 2022]
Operating Systems, Data Mining, Advanced Project - I [Spring 2023]

Dwarkadas J. Sanghvi College of Engineering - University of Mumbai — Mumbai, India
Bachelor of Engineering in Information Technology CGPA: 8.99/10 — May 2021

SKILLS

Languages: Python, Java, C++, R, SQL
Web Technologies: HTML, CSS, JavaScript, Servlets, JSP, Struts, MVC, Spring, React, Django, Flask
Databases: MySQL, Oracle, MS SQL Server
Data Visualization Tools: Tableau, PowerBI, matplotlib, plotly, ggplot2, Chart.js
Data Science & Machine Learning Tools: Tensorflow, PyTorch, NLTK, OpenCV, scikit-learn, numpy, scipy, pandas, dlib
Cloud Services: Amazon Web Services, Google Cloud Platform

EXPERIENCE

Gallagher Re — Mumbai, India
Software Development Engineer — July 2021 - July 2022
- Collaborated with the development team for iFM Online, a proprietary financial modeling web application
- Engaged in full stack **object-oriented** development by implementing **Java EE** components in **Spring** framework
- Leveraged **Struts 2.0** and the **MVC** design pattern and worked on the entire **Software Development Life Cycle (SDLC)**
- Worked with web development technologies like **HTML5**, **CSS3** & **JavaScript**, along with various JavaScript libraries
- Developed complex **SQL queries**, **Procedures**, **Triggers**, **Packages** & **Views** on **Oracle** database
- Engineered the development of 5 significant features in the 21.0 release of the platform including **UI enhancements**, **functionality updates**, **bug fixes** & **dynamic data visualization** using **Chart.js**

Tata Consultancy Services — Mumbai, India
AI Developer Intern — December 2019 - February 2020
- Independently analyzed and identified 4 classes of fraudulent activities related to online airline booking systems
- Trained an advanced **outlier detection** model to detect such anomalous patterns from booking data with an **87% accuracy**
- Integrated the machine learning model into a web application using **TensorFlow**, **Flask**, **HTML**, **CSS**, **JavaScript** and **SQL**

Research et al. — Mumbai, India
Co-founder & Research Lead — April 2020 - July 2021
- Bootstrapped an organization with the mission of encouraging and guiding engineering students to pursue research
- Led research in over **8 multifaceted projects** involving **NLP**, **Computer Vision**, **Deep Learning** & **Data Science**
- Supervised a team of 8 members along with collaborating with over 100 students from all across the country
- Generated over **INR 1 million** in revenue from multiple streams with zero initial capital

PROJECT HIGHLIGHTS

Accessible UI Automation — February 2022 - Present
Stony Brook University. Mentor: I. V. Ramakrishnan — [Python, pywinauto, JavaScript, Node.js]
- Building a software tool for automating traversal of the UI tree of a desktop & web application via natural language instructions by accessing every command on the UI and creating a command bank
- Leverages **Python** for traversing the UI tree of desktop applications along with **JavaScript & Node.js** for web applications
- Aims to improve the accessibility of screen readers by enabling voice commands and reducing the length of the instruction

Turning Labels into Images: A Pix2Pix Based Facade Generator — December 2022
Stony Brook University. Mentor: Dimitris Samaras — [Python, OpenCV, PyTorch]
- Developed image-to-image translation by implementing the **pix2pix GAN** model using **PyTorch**
- Implemented two contrasting Generators using the **U-Net architecture**, trained using **L1 loss** & **L1 + cGAN loss** respectively
- Applied **spectral normalization** to stabilize the training of the discriminator & demonstrated improvement in performance

Vision and Language Navigation using Minimal Voice Instructions — March 2021
Dwarkadas J. Sanghvi College of Engineering. Mentor: Prachi Tawde — [C++, Python, JavaScript, HTML, GCP]
- Developed a navigation model that enables a virtual agent to traverse a 3D environment using minimal voice instruction
- Devised the central algorithm, along with programming the **object recognition** and **path planning** module for the team
- Integrated individual modules into a cloud-based web application deployed on **Google Cloud Platform**

PUBLICATIONS

- **Heart Rate Measurement**. In Journal of Physics: Conference Series 2021 Mar 1 (Vol. 1831, No. 1, p. 012020). IOP Publishing. **[Paper]**