Parth Kansara

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EDUCATION

Stony Brook University — Stony Brook, NY
Masters of Science in Computer Science (STEM) — Expected: May 2024
Coursework: Computer Networking, Computer Vision, Human Computer Interaction [Fall 2022]
Operating Systems OS, 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
Coursework: Data Structures and Analysis, Software Engineering & Project Management, Cloud Computing

TECHNICAL SKILLS

Programming Languages: Python, Java, R, SQL, C++
Web Technologies: HTML, CSS, JavaScript, Servlets, JSP, Struts, MVC, Spring, Express.js, Reactjs, Node.js
Databases: MySQL, Microsoft SQL Server, MongoDB
Data Visualization Tools: Tableau, matplotlib, Chart.js
Cloud Technologies: Amazon Web Services AWS, Google Cloud Platform
Operating Systems: Windows, UNIX/Linux
Version Control Systems: Git, SVN

EXPERIENCE

Knowledge Systems Lab, Stony Brook University — New York, USA
Research Team Member — February 2023 - Present
- Developing a set of **Python** scripts for automation of UI traversal of applications via natural language instructions
- Utilizing **Python**, **JavaScript**, & **Node.js** to store extracted UI elements in tree & graph data structures to reduce search time
- Implemented an custom image classifier, trained on our dataset to identify menu icons of web apps for efficient traversal

Arthur J. Gallagher & Co. (Gallagher Re) — Mumbai, India
Software Development Engineer — July 2021 - July 2022
- Collaborated with the development team of iFM Online, an enterprise web application for financial modeling
- Engaged in full stack development using **object oriented programming** by coding **Java EE** components in **Spring** framework
- Leveraged **Struts 2.0** and the **MVC** design patterns and worked on the entire **Software Development Lifecycle (SDLC)**, including code reviews, testing and debugging
- Worked with web development technologies like **HTML5**, **CSS3** & **JavaScript**, along with various JavaScript libraries
- Developed complex **SQL queries**, **Procedures**, **Triggers**, **Packages** & **Views** on **client databases**
- Engineered the development of 5 significant features in the 21.0 release of the platform including **front-end enhancements**, **backend bug fixes** & **dynamic data visualization** using **Chart.js**

Tata Consultancy Services — Mumbai, India
Full Stack Engineer Intern — December 2019 - February 2020
- Identified 4 classes of fraudulent activities in online airline booking data via data analytics on open-source datasets
- Trained an advanced **outlier detection** algorithms using **Python** to detect patterns from booking data with an **87% accuracy**
- Integrated the machine learning model into a web application using **MERN stack (MongoDB**, **Express.js**, **React JS**, **Node.js)**

Research et al. — Mumbai, India
Co-founder & Research Lead — April 2020 - July 2021
- Bootstrapped an organization committed to inspiring and guiding engineering students to pursue applied research
- Oversaw research in over **8 projects** involving **AI/ML**, **Computer Vision**, **NLP** & **Deep Learning**
- Oversaw operations within our team of 8 members and collaborated with over 100 students across the country
- Leveraged business analytics using Python and was able to generate **INR 1 million** in revenue from multiple streams

PROJECT HIGHLIGHTS

A Review of the Milestone papers in Operating Systems — February 2022 - Present

Pcapture: PCAP Analysis Tool for TCP and HTTP Flows in Networking — September 2022
Stony Brook University. Mentor: Aruna Balasubramanian — [Python]
- Built a tool for analysing and assessing the attributes of the **TCP** & **HTTP protocols** from **PCAP files** using the **dpkt** library
- Retrieve information about the count as well as transaction details including throughput, loss rate and RTT of the TCP flows
- Augmented the TCP model to reassemble HTTP flows along with details about the version and the number of packets sent

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