Naishal Patel

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EDUCATION

Rutgers University, New Brunswick, New Jersey   *Sep 2021 – May 2023*
Master of Science in Computer Science – Specialization in Machine Learning   *GPA: 4/4*
Relevant Courses: Data Structures & Algorithms, Intro to AI, Statistics, Massive Data Mining, Machine Learning, Database for Data Science

Dhirubhai Ambani Institute of Information and Communication Technology, India   *Aug 2016 - May 2020*
Bachelor of Technology in Information and Communication Technology   *GPA: 7.99/10*

RELEVANT EXPERIENCE

IT Research Support Specialist, *Rutgers University*   *Jan 2022 - Present*
- Designing and implementing workflows using **KNIME, Python, Java and JavaScript, TypeScript, HTML/CSS** for **NLP** algorithms, helping more than **20 faculties and 1700 students** with a non-coding background to efficiently utilize the tools for their research.
- Collected data using **Python** from Reddit, Twitter, Volunteer Science, Qualtrics, Meltwater; cleaned the data and prepared visualizations for research use.

Software Developer, *Monocept, India*   *Nov 2020 - Apr 2021*
- Collaborated with a 5 member team following the **Agile** model of development with **SCRUM** methodologies for the development of the two-wheeler insurance portal of ICICI Lombard.
- Spearheaded the frontend development of the portal using **Angular** and utilized **C#** for backend services.
- Optimized the architecture of existing components in Vue/Angular, resulting in a **8% improvement in startup time** which impacted the user experience of over **200,000 customers**.

Web Developer, *Atlantix Digital, India*   *Jun 2020 - Nov 2020*
- Collaborated with a 4 member team following **SCRUM** methodology for the development of a SaaS platform related to eCommerce website development.
- Led the frontend development using **React with Ionic framework** and utilized **Python flask** for backend services and APIs.
- Designed and maintained database using **MySQL with Redis as cache**; also modified existing services which **improved API latency by 15%**.

Software Developer Intern, *Tata Consultancy Services, India*   *Jan 2020 - May 2020*
- Developed ERP modules for HR application in ServiceNow which **landed the company 2 more projects in the future**
- Implemented custom widgets using **Angular JS, HTML, CSS, Bootstrap** to configure pages of ServiceNow modules that send employee info entered by the HR to ServiceNow tables.

PROJECTS

Voyage into the Unknown | *Python, Multiprocessing, Pandas, Matplotlib, Tensorflow, Keras* | GitHub
- Designed and implemented variations of A* algorithms using **Python with multiprocessing**, for different variants of target finding agent in the given gridworld with obstacles, where the agent has no prior knowledge of the environment and learns about it as it traverses along the gridworld.
- Utilized the data generated from the implemented algorithmic agents to train a model using **Tensorflow and Keras** to mimic the behavior of algorithmic agents gaining over **91% accuracy**.

Traveling Salesman Problem Variations | *Python, Multiprocessing, PySimpleGUI, Matplotlib* | GitHub
- Implemented three genetic algorithms: Ant Colony Optimization, Black Hole Optimization, Particle Swarm Optimization using **Python with multiprocessing**; to find a polynomial-time solution of an NP-Hard problem and analyzed the space and time complexity along with optimality of the solutions.
- Developed UI using **PySimpleGUI** for initial user inputs and utilized **Matplotlib** for visualization of results.

Real-time Hair Detection system | *Python, OpenCV, PyTorch, CUDA, Numpy* | GitHub
- Designed and created an application that detected hair and allowed users to alter hair color in real-time which has a significant impact in the fashion industry.
- Used **OpenCV** for preprocessing image data and used **PyTorch** to train PSP ResNet neural network model gaining over **96% accuracy**.

Web application for Warehouse Management System | *PostgreSQL, HTML/CSS, JavaScript, Python* | GitHub
- Designed and implemented a full-stack web application using **HTML/CSS and JavaScript** that allows the manager to keep track of goods and orders in multiple warehouses, and also customers can check the status of their orders.
- Used **PostgreSQL** as the database to implement functionalities like generating Goods Receipt Note and Sales Invoice, managing purchase order and sales order.

TECHNICAL SKILLS

Languages:	Python, Java, TypeScript, JavaScript, C/C++, C#, HTML, CSS, Matlab, R, SQL
Frameworks:	Angular, React, Vue, Django, Flask, REST APIs, AWS, .NET, PyTorch, Tensorflow, Keras
Databases:	MySQL, PostgreSQL, Redis
Tools:	Git, Github, Postman, Docker, CUDA, Visual Studio, Jupyter Notebook

Leadership Experience/ Extracurricular activities

Rural Internship   *Dec 2017*
- *Our team provided basic education to 120+ students in rural school. Taught technologies useful to use at village.*

Coordinator of football event for Concours-2k18   *Nov 2018*
- *Our team handled fixtures and coordinated every aspect of the football match for the Annual sports festival of DAIICT.*

Volunteer for Synapse-2k18   *Feb 2018*
- *Worked with PR team to improve sales and marketing of various events of Synapse(Annual cultural festival of DAIICT) resulting in an increase of 10% footfall.*