

# SNEHAL KARWA

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## EDUCATION

### Binghamton University, SUNY, New York

Aug 2021 - Dec 2023

Master of Science - Computer Science | (GPA - 3.77 / 4.00)

### Savitribai Phule Pune University, India

Jun 2013 - Jun 2017

Bachelor of Engineering - Electronics and Telecommunication | (GPA - 3.64 / 4.00)

## TECHNICAL SKILLS

- Programming Languages: Python, Java, JavaScript, HTML, CSS, C
- Web and Database Technologies: Ruby on Rails, React, Spring Boot, Node.js, Flask, MySQL, MongoDB, PostgreSQL
- DevOps: Docker, Git, GitLab CI/CD, Version Control, Kubernetes
- Other Technologies: AWS, REST APIs, Agile Methodologies, JIRA, Pytest, TensorFlow, PyTorch

## PROFESSIONAL EXPERIENCE

### Software Development Engineer Intern | Amazon Web Services, AWS Redshift

May 2022 - Aug 2022

- Developed a robust **Ruby on Rails** web application, seamlessly integrating with Amazon SDK and APIs for efficient **EC2 instance** retrieval
- Implemented real-time metric collection for memory and CPU usage, enabling precise monitoring and analysis
- Engineered a feature to identify underutilized instances, resulting in a **30% reduction** in resource wastage
- Leveraged **Amazon Simple Workflow Service** to streamline EMR configuration, significantly enhancing the overall performance of the web application
- Technologies Used: Python, Ruby on Rails, AWS, HTML, JavaScript

### Software Engineer | Tata Consultancy Services

Mar 2018 - June 2021

- Deployed a sophisticated rust detection model utilizing deep learning algorithms to pinpoint equipment quality issues, **optimizing inspection time by 40%**
- Designed a full-stack Digital Twin Application (DTA) using **React.JS** and **Python** enabling users to virtually experiment with diverse industrial parameters and achieve optimal results
- Contributed to **Agile** team, delivering iterative updates, and gathering feedback for ongoing improvement
- Technologies Used: Python, SQL, Machine Learning, Deep Learning, RESTful APIs, React.JS

## SELECTED PROJECTS

### Expense Tracker Application (Ongoing)

- Developing a full-stack Expense Tracker application using **Java**, **Spring Boot**, **React**, and **JPA** enabling users to track and manage their expenses effectively
- Utilizing **Docker** to containerize the application, for easy deployment and scalability across different environments

### BookTracker – MERN Application

Feb 2023 - Apr 2023

- Architected a fully functional MERN stack application for efficient book management within a study group
- Leveraged **Node.JS**, **REST API**, **MongoDB** for the implementation, with **React.JS** for reusable UI Components
- Integrated **AWS SNS** for automated reminders, resulting in a notable 60% boost in on-time book returns

### Sports Trend Analysis using Twitter and Reddit

Oct 2022 - Dec 2022

- Created a data pipeline to collect and extract live sports data from social media platforms and store it in **MongoDB**
- Developed a **Flask** based web application with **REST APIs** to analyze and visualize the data using **Plotly**
- Utilized natural language processing techniques to extract sentiment and key themes from social media discussions, enhancing the depth of trend analysis

### Public Transport Tracking service with Distributed Crowd Sourcing Information

Jan 2022 - May 2022

- Built an android application using **Flutter (Dart)** and **Java** for real-time tracking of public transport vehicles
- Orchestrated a distributed network of users to fetch the location of the vehicle and display it on the application
- Devised a **leader election algorithm**, bolstering the resilience of the tracking system ensuring seamless operation

## LEADERSHIP & INVOLVEMENT

- Student Assistant in Computer Science, guiding students in the course Intro to Deep Learning
- Engaged in various leadership roles and campus activities, contributing to a vibrant college community