Sandeep Patel

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Education

IIT Gandhinagar, Gujarat, India	2020 - May 2024
Bachelor of Technology in Electrical Engineering with minor in CSE	CPI: 7.7
Lohia Jagdev Inter College, Nuaon, Kaimur	2017-2019
Senior Secondary, BSEB Board	Percentage: 90.6%
Children's Garden School, Bhabua	2016 - 2017
Secondary School, CBSE Board	CGPA: 10

Work Experience

Searce Inc	July 2024 – Present
Software Engineer	Bengaluru, India

- **Netcore Migration Project (Ongoing)**
  - **Contributed to large-scale Netcore migration project** by refactoring prebuilt **Go** and **Python**-based microservices for **GCP** comaptible to improve efficiency, performance, and scalability.
  - **Engineered multi-cloud compatible architecture** using interface-driven approach, enabling seamless integration with **AWS** and **GCP** based on runtime configuration for improved flexibility and deployment options.
  - **Deployed and managed microservices** on **Google Cloud Platform (GCP)** using **Cloud Run**, **Cloud Batch**, **Pub/Sub**, and **Cloud Storage** for scalable application lifecycle management.
- **Medical Imaging Platform with NOVAI's AI Engine**
  - **Designed and developed full-stack application** using **Django** and **Django-templates**, implementing backend services, RESTful APIs, authentication, and scalable databases with **MySQL** and **Google cloud storage**.
  - **Integrated with NOVAI AI engine** for medical DICOM files processing using real-time responses using **AWS SNS**.
  - **Deployed the web application** on **Google Cloud Run**, achieving cost-effective scalability and simplified infrastructure management through containerization.

Projects

Dataset Generation and AI-Text Detection	Jan - May 2024
Prof. Mayank Singh	

- Generated responses to **24,000 questions** from different AI models and combined all to form a comprehensive dataset.
- Trained a **Longformer model** to predict whether a paragraph is human-generated or AI-generated.
- Developed a website that takes PDFs and ZIP files as input, processes them, and outputs whether the content is human or AI-generated, along with a confidence score.

State of Health (SoH) Estimation of Li-ion Battery using ML	Aug - Dec 2023
Prof. Pallavi Bharadwaj	

- Acquired **NASA Li-ion battery dataset** (reference discharge), meticulously labeled for SoH estimation.
- Analyzed the voltage profiles across charging/discharging cycles to gain insights into the behavior.
- Implemented diverse **regression approaches** to analyze dataset behavior and MSE loss of each model.
- Developed a robust **LSTM model** to capture temporal dependencies in the battery's voltage profile.

Technical Skills

Programming Languages: Python (scikit-learn, TensorFlow, PyTorch, NLTK, NumPy, Pandas, Matplotlib, OpenCV, Seaborn), JavaScript, Golang, C/C++, Dart

Web/Application Development: NodeJS, Django, Flask, Flutter, ReactJS, Express, HTML, CSS, TailwindCSS, MySQL, MongoDB

Services & Tools: Flutter & FlutterFlow, Google Cloud Services, AWS Services, Git, GitLab/GitHub, CI/CD, Docker, Kubernetes, MATLAB

Relevant Coursework: Machine Learning, Natural Language Processing, Data Structures & Algorithms, Probability and Random Processes, Linear Algebra, Computer Architecture, Discrete Mathematics

Achievements / Certifications

Google Certification: Successfully completed the **Cloud Digital Leader Certification** by Google Cloud, demonstrating foundational knowledge of cloud concepts and services.

District Topper: Secured **first position** in Kaimur district, Bihar, in the Senior Secondary Examination, BSEB - 2019.

Technical Development Team Member: Green Club, IIT Gandhinagar.

Event Organizer & Coordinator: CCL-2022 and Hallabol-2023, Intra college sports tournament at IIT Gandhinagar.

Positions of Responsibility & Extra Curriculars

Technical Development Team Member: Green Club, IIT Gandhinagar — Developed & managed websites supporting sustainability-focused student initiatives.

Event Coordinator: CCL-2022, IIT Gandhinagar — Coordinated large-scale sports events involving over 300 participants.

Volunteer: Sanjeevani Medical Camp, Nyasa (IITGN), Basan village:Assisted in organizing medical camp for over 600 villagers.