Bhuvan Thirwani

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EDUCATION

University at Buffalo, State University of New York   Buffalo, NY, USA
Master of Science in Computer Science & Engineering   *Aug 2024 - Present*

Indian Institute of Information Technology Pune   Pune, India
B.Tech in Computer Science & Engineering   *2018 - 2022*

TECHNICAL SKILLS

Technologies: AWS, Docker, Kubernetes, Apache Kafka, Flink, Grafana, Redis, Git, CI-CD, System Design
Languages: Python, Nodejs, Java, Javascript, Typescript, SQL, NoSQL, Machine Learning, Deep Learning, MongoDB
Frameworks: Flask, Pandas, Reactjs
Core: Object-Oriented Design Solutions, Best Practices, Technical Documentation

EXPERIENCE

Member of Technical Staff-1   **Euler Motors**   **July 2022 - August 2024**
- Owns 2 AI Based Software Products & Developed pioneered feature for vehicle hardware data extraction & boosted electrical components testing by 500% using **Computer Vision** System.
- Collaborate advanced Analytics to monitor vehicle performance and detect issues remotely via cloud Networking.
- Developed Real-time data pipeline using Apache Kafka & Flink for processing real-time telemetry data of vehicles.
- Created visual representations of KPIs for financiers using real-time data of 5000 EVs, resulting in improved decision-making.
- Implemented **Docker** and **Kubernetes** for projects deployment, elevating platform efficiency and scalability by 5 times.

Software Engineer Intern   **Paytm Money**   **Jan 2022 - June 2022**
- Implemented Live Feed Data of 7000 Stocks using Asynchronous **NodeJS** and **Websocket** Technology.
- Completed Load - testing for 100,000 customers simultaneously. Utilized Quantitative methods and Networking protocols to optimize data delivery and performance.
- Reduced the Real-time stock market data latency from 400ms to 2ms using **Springboot** (MVC), **MySQL** and **Redis** Cache using Java - 8.

Research Intern   **DRDO**   **April 2021 - Jul 2021**
- Created Landslide Prediction Model & Landslide Susceptibility Index Map for Search and Rescue team.
- Used **Oversampling** and **Undersampling** techniques, **GRID SEARCH CV** with Weighted **Decision Tree** model.
- Implemented Frequency Ratio & Multi-Criteria Decision techniques for generating vulnerability map with 99% accuracy.

PROJECTS

Real-Time Vehicle Dashboard | *Redis, Python, Flask, AWS S3, Druid DB, Amazon Kinesis*   **July 2022 - December 2022**
- Developed a user-friendly, real-time dashboard to monitor live data for up to 10,000 vehicles simultaneously.
- Automated generation of Excel and PDF trip reports, covering data for the past 90 days.
- Implemented cron jobs to synchronize Redis and PostgreSQL databases, optimizing system performance.
- Leveraged Amazon Glacier for long-term storage and retrieval of vehicle data, archiving records beyond 90 days for up to a year.

User & Identity Access Management System | *Redis, Python, Flask, Reactjs, SQL, Computer Security*   **Jan 2024 - July 2024**
- Developed a comprehensive User & Identity Access Management System integrating users, roles, actions, resources & apps.
- Implemented granular control over user permissions and resource access across multiple applications, utilizing **Redis** along with **SQL** for efficient data management for more than 10 Million Users

Al Proctoring System using Deep Learning Techniques | *Deep Learning, Flask, Reactjs, SQL*   **Aug 2021 - Nov 2021**
- Designed a Web Application for conducting online exams with 15+ features for Students and Professors.
- Performed Eye Tracking, Face Authentication & Security, Head Movement Tracking, Mobile Phone Detection, Multiple Person Detection, Tab/ Window Switching & Voice Detection to monitor 1000 Students simultaneously.
- Composed a **Research Paper**: Proctoring System using DL Techniques in AIRHS 22 Conference on Al for Resilient Happy Society.

Admin Dashboard | *JavaScript, HTML, CSS, Tailwind CSS, Hugo*   **November 2024**
- Developed a responsive and user-friendly admin dashboard template using **Tailwind CSS**, supporting CRUD operations, modals, and widgets for seamless data management.
- Integrated 10 advanced components such as charts, tables, and drawers, enhancing data visualization and interactivity across multiple pages.

CERTIFICATIONS

- **Machine Learning** by **Andrew NG** - Coursera, authorized by **Stanford University.**
- **AWS Cloud Practitioner Essentials** - Amazon Web Services.
- **Algorithmic Toolbox** by **University of California San Diego** - Coursera.