Onkar Mundhe
Indian Institute of Technology, Goa

Fourth Year **Undergraduate**, **Mathematics and Computing**
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Education

BTech, Mathematics and Computing, Indian Institute of Technology Goa	2021 – Present
Class 12, CBSE, Vagad Pace Global School , Virar	2020 – 2021
Class 10, Government Secondary School	2018 – 2019

Experience

Data and DevOps Intern at ProcessVenue [Predusk Technology Pvt. Ltd.] (December 2024 - ongoing)
- Designed and implemented end-to-end data pipelines using industry-standard ETL tools.
- Leveraged Selenium and Playwright to automate critical business workflows, reducing manual processing time and minimizing human error
- Developed automated test scripts using Selenium and Playwright to validate data integrity and application functionality across multiple browsers
- Deployed and managed AI agents that streamlined business operations, resulting in measurable productivity improvements and cost reductions
- Designed and implemented AI agents that automated manual workflows.
- Skills: Python, Selenium, Playwright, Streamlit, Github, AI Frameworks, Virtual machine deployment and management.

Weakly-Hard Real-Time Scheduling to Minimize the Number of Processors [Github] (July 2024 - December 2024)
[Supervision of Dr. Niraj Kumar | IIT Goa]
- Utilized the Gurobi solver to optimize ILP models, effectively reducing the computational resources needed by identifying the minimum number of processors required for Weakly hard real-time tasks.
- Implemented advanced ILP techniques including rounding and relaxation methods to enhance solver efficiency and accuracy
- Integrated the Gurobi solver within a Python-based framework to streamline the optimization process
- Conducted comprehensive analyses to compare baseline algorithms against optimized solutions
- Providing insights into improvements and operational efficiencies in real-time systems

Projects

GitHub Repository Analyzer - Flask AI-Powered Code Analysis Tool [Github] [Live_Demo]
- Developed a full-stack web application using Flask, Python, and Google's Gemini-2.0 Flash LLM to analyze GitHub repositories
- Implemented RESTful API endpoints that fetch repository data from GitHub API, analyze code structure, and generate AI-powered insights
- Designed modular architecture with clear separation of concerns (routes, data fetching, code analysis, and AI processing)
- Engineered data processing pipeline that transforms unstructured repository data into meaningful insights
- Deployed the application on AWS using EC2 instances, configured security groups, and implemented CI/CD pipeline for automated deployments

PDF Summarization Tool with Multi-LLM Architecture [Github] (January 2025 - February 2025)
- Engineered and deployed a Streamlit web application that automatically generates concise summaries from PDF documents using a multi-agent AI architecture
- Implemented robust error handling and rate limiting strategies to manage API interactions between Groq and Gemini LLM services, ensuring reliable performance
- Optimized text processing by developing an efficient chunking system that breaks down large documents into manageable segments for improved AI processing

Typing speed test [Github] (May 2022 - July 2022)
- Crafted a web application using HTML, CSS, and JavaScript to measure and enhance typing speed
- Designed and implemented an engaging and responsive user interface
- Employed efficient coding practices to ensure quick load times and smooth performance

Skills

Programming Skills:	C, C++, Java, Python, HTML , CSS , JAVASCRIPT , REACT JS , SQL
Software Skills:	AWS, Flask, Streamlit, Gurobi solver, MATLAB , Git , Github , Linux , Solid works , LaTeX
Relevant Coursework	Real Analysis, Machine Learning , Theory of Computation , Discrete Mathematics , Probability and Statistics , Multivariate Calculus , Algebra , Numerical Analysis, Algorithm Design
Optimization and Analytical Skills:	Integer Linear Programming (ILP), Mathematical Modeling , Linear Programming

Positions of Responsibility

Member of Cultrang (Cultural fest)	Member of Registration team of Cultrang	(2023)
Member of Chakravyuh team	Member of Athletics team of chakravyuh	(2023)

Achievements

- Achieved certificate in 55th Inter IIT (Athletics)
- Achieved Medal of completion in RG Marathon 5000m
- Selected for Super 50 program by Maharashtra Government

Extracurriculars & Hobbies

- Represented in Athletics(1500m) for 55th Inter IIT Sports Meet
- Hosted several events in college (Sports fest Chakravyuh of IIT GOA)
- Gym enthusiast