Yash Patodkar

Santa Clara, CA | patodkaryash@gmail.com | 669-343-4851 | LinkedIn | Github

EDUCATION

Santa Clara University | GPA: 3.67/4.0

Sep 2024 - May 2026 | Santa Clara, USA

Masters – Computer Science and Engineering

Relevant Coursework: Distributed Systems, Computational Creativity, Linear Programming, Design and Analysis of Algorithms.

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PG-DAC in Advanced Computing

Sep 2021 - May 2022 | Pune, India

Relevant Coursework: Java (OOP, DSA), Web Technologies, Database Systems, .NET, Software Engineering, OS & Shell Scripting.

Vishwakarma Institute of Technology

Aug 2017 - Jun 2021 | Pune, India

Bachelor of Technology

CDAC ACTS | Grade A

Relevant Coursework: Linear Algebra, Numerical Optimization, Simulation & Modeling

WORK EXPERIENCE

Fortinet Technologies

May 2022 - Jun 2024 | Pune, India

Software Development Engineer

- Reduced Alert Mean Time to Detect (MTTD) by 50% across multi-instance SOCs by developing a <u>Global Visibility Dashboard</u> using AngularJS, improving analyst response with live alert correlation and centralized KPIs.
- Expanded the core FortiSOAR UI library by creating 15+ reusable UI components and data visualization widgets (e.g., Funnel Charts, Top-X) in AngularJS including guided workflows to help users adopt the widgets effectively.
- Built an <u>AI Assistant Bot</u> integrated with GPT-4 function calling using Python and Angular, enabling users to generate workflows and query modules through natural language.
- Optimized natural language understanding and generation for FortiSOAR workflows by **fine-tuning a GPT-3 model** using adapter-based methods (**LoRA**) with domain-specific playbook data, leading to context-aware, low-latency, and cost-efficient playbook creation via an integrated AI assistant, and **reducing manual effort by over 50%.**
- Built **Python API connectors** for services like Google Drive, OpenAI, and Microsoft Exchange, enhancing system integration and adding 10% more entries to the FortiSOAR connector catalog.
- Resolved 100+ bugs across **AngularJS UI, Spring Boot services**, and key **microservices (Notifier, Gateways)**, reducing customer-reported issues by 35% and improving release stability.

PROJECTS

Re-Mind AI - Flask, ReactJS, Mistral AI, MongoDb NoSQL: Youtube Demo

- Built a full-stack mental health tracker (Flask + ReactJS) that uses the Mistral LLM to detect and label cognitive distortions in user journal entries Instantaneous.
- Converted insights from five authoritative psychiatric books into vector embeddings stored in ChromaDB for use in real-time retrieval-augmented generation (RAG).
- Designed the system for fully offline use, guaranteeing privacy without any cloud dependency.

System Design Project - Book A Show | Java, Spring Boot, ReactJS, MySQL | Github

- Developed a full-stack ticket booking platform using **Spring Boot (Java), ReactJS, and MySQL**, simulating real-world workflows like seat selection, user management, and secure ticket booking.
- Architected the backend using layered design (Controllers, Services, DAOs, DTOs) with role-based access control via Spring Security.
- Built and consumed **RESTful APIs**, applied relational schema design, and handled secure user data with authentication and session management.
- Containerized the backend and frontend services with Docker, enabling isolated development, simplified testing, and rapid deployment on cloud.

Presentation Suite - Hackathon Project | Node - JS | Devpost

- Created an Adobe Express add-on that automatically generates full PowerPoint presentations from user prompts, using Gemini's APIs.
- Implemented real-time slide generation from topic prompts (e.g., "Animal Kingdom") using Gemini's text API, followed by slide deck creation with pre-filled content and titles.
- Engineered the frontend with React, modular component structure, and Adobe Express's extension API to deliver seamless UX.
- Reduced presentation creation time from **hours to under 5 minutes**, increasing productivity for hackathon users.

Prompt-to-Reel Pipeline | Python, Gemini, ElevenLabs, MoviePy

- Developed a content creation pipeline that transforms a single user prompt into a short, engaging video clip suitable for platforms like Instagram Reels and TikTok, reducing a workflow that would take a user **7-8 hours to just a few minutes.**
- Automated Scriptwriting and leveraged the Google Gemini API to analyze a user's topic and generate multiple distinct script options, each structured with dialogue and visual cues.

ACHIEVEMENTS AND PUBLICATIONS

- 1st Place Hack for Humanity (2024): *Re-Mind AI*, a mental health assistant leveraging LLMs to identify cognitive distortions and provide real-time feedback. Devpost
- Recognized by Adobe for delivering insightful technical and user-centric feedback on an AI-powered Adobe Express add-on, and selected for an exclusive **Adobe HQ tour**.
- 99.2 percentile (Rank 151/20,000+) in national CDAC PG-DAC entrance exam.
- Awarded Best Undergraduate Project out of 200+ submissions for building a fully functional automatic indicator system for two-wheelers.
- Authored a technical article on NP-hard challenges faced in Inter-Satellite link optimization and **dynamic routing in Satellite Communications**, under the guidance of Dr. Keyvan Moataghed.

VOLUNTEERING AND LEADERSHIP

St. Ann's School | High School Teacher

Jun 2024 - Aug 2024 | Beed, India

- Designed and delivered a comprehensive curriculum on Object-Oriented Programming principles to a class of 50 students.
- Led to a 30% improvement in average coding assignment scores and helped 10+ students complete independent mini-projects in Java.

TECHNICAL SKILLS

- Languages: Java, Python, JavaScript, TypeScript, C#, C++, Shell Scripting, HTML, CSS
- Frameworks: Spring Boot, ReactJS, AngularJS
- Databases: MySQL, MongoDB, PostgreSQL
- Developer Tools: Git, Docker, SonarQube, Apache JMeter, CI/CD pipelines, REST APIs
- Design: Object-Oriented Design, Microservices, System Design, Kafka, RabbitMQ, Maven