

# SHUBHAM MISHRA

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## PROFESSIONAL SUMMARY

Software Developer Engineer with 4+ years of experience in developing innovative and scalable software solutions. Proven expertise in full-stack development. Adept at collaborating with cross-functional teams to deliver high-quality products. Seeking a SDE role to leverage my skills and passion for creating innovative solutions that enhance customer experiences and drive technological advancement.

## SKILLS

**Frontend:** JavaScript, JavaScript, ReactJS, ExtJS, NextJS; **Backend:** NodeJS, Python, Express, Java, C, C++, PHP, SQL; **Databases:** Oracle, MySQL, MongoDB, Elasticsearch, Pinecone; **Cloud Computing:** AWS; **Scripting:** Bash, Shell Script, ELK; **Frameworks & Others:** Version control - GIT, Restful API services, Linux, Docker, Kubernetes, Database optimization, Data Structures & Algorithms, OS fundamentals, Software Engineering, Software Design Patterns, Back-End Web Development, Full-Stack, API development, MATLAB, LLAMA, Whisper, Spotify API, Postman

## COURSEWORK

Advanced Operating Systems, Artificial Intelligence, GPU Architecture & Parallel Programming, Big-Data Management, Introduction to Deep Learning, Data Mining Techniques, Database Management Systems, Information Retrieval & Web Search, Real-Time Embedded Systems, Pattern Recognition, Advanced Computer Vision, Design and Analysis of Algorithm.

## EXPERIENCE

### Senior Software Engineer

Mar 2025 to Present

#### Untacked.ai – CA, USA

- Built a privacy-first AI platform with SvelteKit, supporting chat, image, and video generation with zero data retention.
- Developed real-time chat UI and canvas-based tools for multimodal AI workflows.
- Migrated from Supabase/Vercel to Northflank, implementing IaC pipelines for preview, staging, and production to reduce latency and cold-starts.
- Replaced Supabase with self-hosted PostgreSQL, improving performance and control over schema and access policies.
- Built scalable, real-time APIs with model routing and streaming support for multi-LLM inference.
- Led performance and observability optimizations across the stack for a faster, more reliable user experience.

### Lead Developer & AI/ML Engineer

Jun 2024 to Oct 2024

#### M9 Market – CA, USA

- Developed a full-stack app. with Next.js, integrating MongoDB and MySQL to enable seamless user interaction and efficient data management.
- Designed and maintained a Flask-based microservice to handle all machine learning workflows, including model training and inference.
- Managed AWS infrastructure, including EC2, S3, and SageMaker, to ensure scalable and reliable ML operations.
- Trained, fine-tuned, and aligned the LLAMA 3.2B-instruct large language model (LLM) to generate viral scripts for content creators.
- Augmented a vector database for Retrieval-Augmented Generation (RAG) using Pinecone to adapt to current viewer trends dynamically.
- Implemented video transcription algorithms to process user-generated content, boosting content creator viewership.

### Senior Software Engineer

Jul 2019 to Aug 2023

#### Vistaar System Pvt. Ltd. - Mumbai, India

- Developed and implemented a robust freight rate computation system using ELK, ReactJS, and Oracle, enabling 20% faster pricing calculations.
- Created automated sales reports and live dashboards using ELK, Oracle and JavaScript, reducing manual reporting time by 50%.
- Automated weekly reporting tasks using Python and Shell scripts, improving efficiency by 30%.
- Designed system architecture diagrams, algorithms, unit test plans, and business rules documents.
- Refactored code and optimized data pipelines, improving application performance and user experience.
- Developed an end-to-end ETL module using Oracle, Java and JavaScript to extract, transform and load data from PSV files received from SAP.
- Created a comprehensive portfolio planning module enabling rolling forecasts and strategic planning for resources and investments.
- Implemented a novel revenue prediction model using Oracle, JavaScript, Java and Shell, enabling automatic adjustments.
- Developed a versatile data visualization tool using Oracle, JavaScript and Java empowering users to gain data-driven insights.
- Mentored newcomers by providing comprehensive KT, accelerating their ramp up time by 50%. Led code reviews to maintain high code quality and ensure best practices.

## EDUCATION

### Master of Science (MS), Computer Engineering

Sept 2023 - Mar 2025

University of California - Riverside, CA

GPA: 3.89/4

## PROJECTS & HACKATHON

### Ongaku – TikTok Hackathon

- Developed an AI music recommender, Ongaku, to suggest tracks for TikTok videos by analyzing video content.
- Utilized state-of-the-art AI algorithms to understand video moods and recommend fitting music, considering both vocals and instrumentals.
- Overcame latency challenges by leveraging Pinecone as a vector database for emotion similarity calculations.
- Gained experience with vector databases (Pinecone) and AI applications

### Iskul – UC Berkeley AI Hackathon

- Created Iskul, a personal guide curating learning paths based on user expertise and available time.
- Implemented SOTA LLM models (LLAMA, Whisper) and Groq's hardware accelerators for efficient inference.
- Addressed challenges of video transcript availability and latency due to longer transcripts, enhancing the system's performance.

### PseudocodeDiffing – Ghidra Plugin

- Developed a custom Ghidra plugin in Java for comparison of decompiled binary files (bin or exe), enhancing reverse engineering capabilities.
- Utilized Ghidra's FlatProgramAPI and FlatDecompilerAPI to enable detailed analysis and comparison of functional logic and code structure.
- Integrated the plugin into Ghidra's plugin ecosystem through effective use of PluginTool and ComponentProvider, enabling seamless deployment and usability across different Ghidra environments and projects.

### Fix for RTL8821CE Driver Malfunctioning

- After an upgrade of the latest version of Ubuntu, the wifi drivers were dysfunctional. Revamped the Wi-Fi driver packages to support the latest version of Unix using C++, bash, shell.
- Refractory packages are drawn and recommended on the askubuntu platform if the driver malfunctions.