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
- Architected and developed a privacy-first AI platform using SvelteKit and PostgreSQL, enabling zero-retention multimodal data processing.
- Developed scalable, real-time APIs with model routing and streaming inference for multi-LLM workflows, reducing latency by 40%.
- Built real-time chat UI and canvas tools supporting multimodal interactions including chat, image, and video generation.
- Migrated infrastructure from Supabase/Vercel to Northflank with IaC pipelines, improving deployment reliability and performance.
- Replaced managed services with self-hosted PostgreSQL for greater control over schema, access policies, and database performance.
- Implemented authentication from scratch using JWT and session-based logic, enabling persistent login.
- Wrote unit and integration tests using Vitest to ensure feature reliability across frontend and backend code.
- Led full-stack performance and observability optimizations, cutting cold-start time and improving system responsiveness.

Lead Developer & AI/ML Engineer   Jun 2024 to Oct 2024
M9 Market – CA, USA
- Built a full-stack content platform using Next.js, MongoDB, and MySQL for dynamic user interaction and data management.
- Designed a Flask-based microservice to manage all ML workflows including model training, inference, and orchestration.
- Managed AWS infrastructure (EC2, S3, SageMaker) to support scalable, GPU-accelerated LLM deployments.
- Fine-tuned and deployed the LLAMA 3.2B-instruct model for generating viral scripts using custom hyperparameters and high-throughput APIs.
- Implemented a vector-based RAG pipeline with Pinecone for personalized content generation aligned to viewer trends.
- Developed transcription algorithms to process video content and boost creator engagement through content-aware AI.

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.

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.