

Abhinav Jindal

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PROFESSIONAL EXPERIENCE

Fullstack Software Engineer

November 2024 – Present

PayPal

San Jose, California

- Built FX contract capabilities in Java and React for business-critical payments workflows, improving merchant onboarding and supporting low-latency processing across millions of daily transactions.
- Owned end-to-end onboarding of Middle Eastern and African countries to the Merchant Hub, coordinating across multiple engineering and business teams to unlock \$17M in annual revenue.
- Designed and deployed the FX multi-agent orchestration, automating transaction analysis and root-cause debugging (Google ADK, CrewAI, MCP, RAG), reducing live support query turnaround time by 75%.

AI Engineer

October 2022 – September 2024

USC Information Sciences Institute

Los Angeles, California

- Built the Q&A agentic workflow for KMASS AI onboarding assistant used by 100+ new hires that delivered contextual and personalized guidance, accelerating time-to-productivity by 60%.
- Designed prompt workflows using zero-shot and few-shot in-context learning across open- and closed-source LLMs to generate accurate, code-centric content for the assistant.
- Deployed a FastAPI-based ML inference service, optimizing retrieval performance using evaluation metrics such as Recall@K and MRR.

Software Engineer

May 2023 – January 2024

Intel

Santa Clara, California

- Worked on optimizing performance and preventing future Cobalt graphics simulation module regressions.
- Identified and fixed bottlenecks in the codebase using VTune, achieving 300% CPU performance gain.

Software Developer I

June 2020 – August 2022

The D.E. Shaw Group (Schrodinger)

Hyderabad, India

- Built data processing, computational, and visualization tools to accelerate drug discovery & material science.
- Led the Admin Panel modernization to React and Flask and introduced Docker-based containerization, reducing technical debt, establishing a single source of truth, and accelerating feature delivery.
- Modernized the LDL CI/CD pipeline with Docker and Jenkins, and supported the migration to a microservices architecture through Kubernetes deployments and SSO integration.

EDUCATION

Master of Science (Honors), University of Southern California

August 2022 – May 2024

Computer Science (CGPA: 4.0/4.0)

Los Angeles, California

Bachelor of Technology, Indian Institute of Technology (IIT), Ropar

July 2016 – May 2020

Computer Science and Engineering (CGPA: 9.05/10)

Punjab, India

TECHNICAL SKILLS

Languages: Python, Java, C/C++, JavaScript, TypeScript, SQL, Go

Frameworks: React, Next.js, Flask, Django, FastAPI, Spring Boot, Node.js, Hibernate

Tools/Platforms: Docker, Kubernetes, Git, GCP, Jenkins, Harness, Elasticsearch, VTune, Jupyter Notebook

AI/ML: PyTorch, TensorFlow, FastMCP, LLaMA, CrewAI, LangChain, Faiss, Pinecone, Azure OpenAI Service

PROJECTS

Multimodal Open Set Emotion Recognition

| *Python, PyTorch, NLP, Transformers, BERT*

- Built a multimodal emotion recognition model combining HuBERT audio embeddings and SBERT text embeddings, using cross-attention fusion and modality gating to adaptively weight each modality.
- Improved audio-text representation alignment with contrastive learning (InfoNCE) and projection heads, increasing robustness to noisy multimodal inputs.
- Implemented open-set recognition using energy-based OOD scoring and temperature scaling, and benchmarked against OpenMax and MC dropout for unknown-class detection.
- Improved generalization with SpecAugment, noise injection, and modality dropout, while training efficiently on a single GPU using AMP and gradient accumulation.

Ebay Search Portal

| *React, Flask, Android Studio, Kotlin, MongoDB, GCP*

- Deployed a web and android application on GCP for efficient searches across millions of eBay products.
- Integrated multiple APIs, including eBay search, IPinfo and Google, to offer comprehensive product details.