

# Abhinav Jindal

 abhinavjindl.github.io  abhinavjindal98@gmail.com  LinkedIn  GitHub  +1 (213) 561-9784

## PROFESSIONAL EXPERIENCE

### Software Engineer

October 2022 – Present

USC Information Sciences Institute

Los Angeles, California

- Part of the KNIC team; building a companion agent to support novice users to kick start their onboarding process using a Generative LLM-based AI agent.
- Utilizing zero-shot in-context learning and prompt engineering to generate code-related question-answer pairs through OpenAI APIs and Code Llama.
- Developed a FastAPI backend for knowledge retrieval leveraging Elasticsearch and Faiss to optimize the search and retrieval process.

### Graduate Software Engineer Intern/Co-op

May 2023 – January 2024

Intel

Santa Clara, California

- Worked on optimizing performance and preventing future Cobalt graphics simulation module regressions.
- Analyzed the code-base using VTune to identify and address bottlenecks, resulting in a 300% boost in CPU frequencies.

### Software Engineer I

June 2020 – August 2022

The D.E. Shaw Group (Schrodinger)

Hyderabad, India

- Developed data processing, computational, and visualization tools to accelerate drug discovery & material science.
- Tech Lead of Admin Panel's React & Flask transition and docker containerization, reducing tech-debt and facilitating feature development.
- Revamped LDL CI/CD pipeline using Docker and Jenkins to streamline development, testing and deployment.
- Undertook microservice architecture migration, focusing on Kubernetes deployments and SSO tasks.

### Data Science Intern

May 2019 – July 2019

Linkbal Inc.

Tokyo, Japan

- Developed predictive models using CatBoost and deep learning, achieving a 92% accuracy rate in event ranking.

## 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, Docker, Kubernetes, SQL, Go, Kotlin, HTML/CSS

**Frameworks:** React, Flask, FastAPI, Node.js, MongoDB, Django, Hibernate, PyTorch, Tensorflow, Elasticsearch

**Developer Tools:** Git, GCP, Jupyter Notebook, Colab, MATLAB, Jenkins, VTune, Android Studio, Visual Studio

**Relevant Courses:** Algorithms, Data Structures, Database Systems, Web Technologies, Game Development, Machine Learning, Artificial Intelligence, Natural Language Processing, Computer Vision, Operating Systems, Computer Networks

## PROJECTS

### Multimodal Open Set Emotion Recognition

| Python, PyTorch, NLP, Transformers, BERT

- Trained audio-text multimodal emotion recognition model using HuBERT and SBERT generated embeddings.
- Addressed open-set problem using OpenMax, temperature scaling and Monte-Carlo techniques to classify instances into unknown labels.
- Applied data augmentation techniques on audio samples to improve robustness over unseen samples.

### 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.

## HONORS AND AWARDS

- Admitted in the USC **MSCS Honors** for maintaining perfect grade.
- Merit Scholarship at IIT for securing **AIR-1343 (99.91 %ile)** in IIT-JEE and **State Rank 1** in JEE Mains.