Abhinav Jindal

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EXPERIENCE

Intel | Graduate Software Engineer Intern
Santa Clara, CA | May 2023 - Present

- Optimized the speed and prevented future regressions of the cobalt simulation platform for their graphics testing module.
- Conducted extensive analysis using V-Tune to identify and address inefficiencies, resulting in a 300% increase in CPU frequencies.

Information Sciences Institute (ISI), USC | AI Developer
Los Angeles, CA | Oct 2022 - Present

- Pioneered the Faiss Knowledge Store for efficient retrieval of pertinent SBERT embedded documents.
- Implemented various APIs based on Elastic Search indexes, prompt-based GPT query resolvers and caching mechanisms.

Schrödinger (D.E. Shaw) | Software Developer
Hyderabad, India | June 2020 - Aug 2022

- Developed data pre-processing, computational and visualization tools to accelerate drug discovery and material science.
- Led the Admin Panel team in React migration and containerization, improving its overall tech-stack and development experience.
- Reinvented end-to-end pipeline of LDLearning, an interface between LD platform and machine learning models, using Docker and Jenkins.

Linkbal | Data Science Intern
Tokyo, Japan | May 2019 - July 2019

- Constructed *Event Cancellation Prediction* models using CatBoost and neural networks to refine ranking of events achieving 92% accuracy.

PROJECTS

Formality Transfer and Offensive Language Mitigation
Feb 2023 - May 2023

- Executed fine-tuning of the OpenAI Large Language Model (LLM), GPT-3, using a specialized dataset to metamorphose sentences into a polished and considerate formal structure.
- Introduced a proprietary dataset, with more than 500 instances, attaining fluency and performance on par with human levels.

Medical Segmentation Decathlon
Aug 2019 - Apr 2020

- Innovated in modeling single 3D image segmentation across different tasks and adapting to unseen tasks without annotations.
- Trained U-NET FCN-based model along with 3D image processing techniques, attaining dice scores surpassing 90%.

Multimodal Learning for Audio-Video Compatibility
Sept 2019 - Dec. 2019

- Pioneered an approach for forecasting the compatibility order of YouTube videos to an audio song to predict a similarity score.
- Extracted a myriad of features encompassing emotions, transitions, beats, and pace from audios and videos.

EDUCATION

University of Southern California, Los Angeles
Master of Science (Honors), Computer Science
Aug 2022 - May 2024 (Expected Graduation)
CGPA: 4.0 / 4.0

IIT, Ropar
Bachelor of Technology, Computer Science
July 2016 - May 2020
CGPA: 9.05 / 10.0

SKILLS

Languages
Python, Java, C/C++, JavaScript, TypeScript, Docker, PHP, HTML/CSS, PostgreSql, MySQL, Kubernetes

Frameworks
Django, React, Flask, Keras, PyTorch, OpenCV, ElasticSearch, Faiss

Tools
VTune, Jenkins, Jupyter Notebook, Colab, MatLab, LaTeX, git, Visual Studio

COURSEWORK

Graduate
Analysis of Algorithms
Database Systems
Applied Natural Language Processing
Machine Learning for Data Science

Undergraduate
Computer Vision, Artificial Intelligence, Machine Learning, Multimedia Systems, Image Analysis, Data Structures, Algorithms, Databases, Operating Systems, Computer Networks, Probability Theory, Linear Algebra

HONORS AND AWARDS

- Admitted in the USC **MSCS Honors** for maintaining perfect grade.
- Merit Scholarship at IIT Ropar for securing an **AIR-1343 (99.91 percentile)** in IIT-JEE exam and **State Topper** in JEE Mains.