Aditya Jonnalagadda

✉ aa20475@gmail.com ☎ (848) 209-7896 🖥 aa20475.github.io ⊙ aa20475 in aditya-abhiram

Education

Rutgers, The State University of New Jersey	**New Brunswick, NJ**
MS in Computer Science; 4.00 GPA	Sept 2022 - Present

Coursework: DSA, Intro To AI, ML- II, NLP, Math Foundations for DS, Brain Inspired Computing
Activities & Societies: Computer Science Graduate Student Society (CSGSS)

Indian Institute Of Technology (IIT), Indore	**Indore, India**
BTech in Electrical Engineering; 8.12/ 10 GPA	July 2017 - May 2021

Coursework: Real & Complex Analysis, Linear Algebra,Microprocessors and Digital Systems Design, Probability and Random Processes, VLSI Systems and Technology, Digital Signal Processing
Activities & Societies: Fine Arts Club, Music Club, Electronics Club, ML/AI Society

Skills & Courses

Programming C++, Python, Java, TypeScript
Full-Stack Angular, Redux, React, Spring, Flask
Frameworks PyTorch, OpenCV, TensorFlow, SQL, MongoDB

Experience

Youtube, Google	**Mountain View, CA**
Software Engineering (SWE) Intern	May 2023 - Sept 2023

- Implemented and improved "A Robust Error Concealment Technique using Data Hiding for Image and Video Transmission over Lossy Channels", an invisible watermarking scheme.
- Enhanced the algorithm by making it robust to multiple compression algorithms, such as JPEG, H.264, and VP9, and evaluated its performance using various metrics and scenarios.
- Successfully achieved **perfect reconstruction** of the watermark even after the image went through **50 JPEG quality compression** and videos went through **40 CRF H264 compression**, demonstrating the robustness and effectiveness of the implemented error concealment technique.

FICO	**Bangalore, India**
Software Engineer - Associate	Jul 2021 - Jul 2022

- Led **API gateway** development, centralizing FICO URLs and enhancing security with URL beautification and protection. Created a customizable Swagger-style **API portal** with rate limiting and sandbox testing.
- Contributed to the **FAC portal** revamp, streamlining service provisioning, blocking, and user role assignment on the cloud platform. Implemented a database cache logic to make startup times **20x** faster.
- Optimized UI for **10x** responsiveness with Angular, and introduced a Redux-based customizable UI for clients.

PranavaEET	**Hyderabad, India**
Software Development Intern	May 2018 - Jun 2018

- Developed neural networks in Python for a custom Balancing Act environment, achieving a mean episodic reward of **196** within a self-made reinforcement learning framework.

Projects

Semantic Face Image Retrieval	Dec 2020 - Aug 2022
Undergraduate Thesis	**Dr. Vivek Kanhanghad's Lab**

- Innovated an image retrieval pipeline for Face Image retrieval using prompts achieving an impressive F1 score of **0.7**, alongside curating a comprehensive dataset comprising **100** samples of natural face descriptions paired with corresponding images.

Intuitive Skeleton Tool for Animation	May 2020 - Aug 2020
Google Summer of Code	**Synfig Studio**

- Implemented an Intuitive Skeleton Animation tool for Synfig Studio as a part of Google Summer Of Code, 2020.

Motion Matching	May 2019 - Aug 2019
Google Summer of Code	**Godot Engine**

- Implemented & Integrated a cutting-edge robust Motion Matching pipeline, achieving an impressive loss of **0.2** with Godot Engine's Animation System.

Detection of Myocardial Infarction	Feb 2019 - Apr 2019
Undergraduate Researcher	**Dr. Ram Bilas Pachori's Lab**

- Implemented and validated the FBSE-EWT algorithm in collaboration with Dr. Ram Bilas Pachori, achieving an exceptional **99.6%** accuracy for myocardial infarction detection.

Awards

UBS Pitch Competition, 3rd Place	May 2023

Positions of Responsibility

Cynaptics Club **Indore, India**
Club Head & Founding Member Aug 2019 - Aug 2020
 – Led efforts to connect the student community with the world of AI, orchestrating multiple workshops to introduce the basics of Machine Learning and Artificial Intelligence.
 – Successfully organized **5** workshops and **3** flagship events, facilitating enhanced AI awareness and understanding among participants.

Counselling cell, IIT Indore **Indore, India**
Core Team Member Oct 2019 - May 2021
 – Championed holistic student well-being by orchestrating impactful events, nurturing a seamless communication bridge between administration and **500+** students.
 – Fostered a supportive **3-tier** mentorship structure, resulting in an enriched campus experience and enhanced mental health.

Google Explore ML **Indore, India**
Co-Facilitator Aug 2019 - Dec 2019
 – Conducted extensive **15+** hour tutorials and workshops for undergraduate and graduate students, focusing on diverse topics including Neural Networks, Classification, Regression, Convolutions, Image Captioning, and Model Evaluation.