Anshay Agarwal

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EXPERIENCE

Qualcomm
Senior Lead Software Engineer | Hyderabad | April 2023 – present

- Achieved a 96% reduction in Flicker correction latency for XR on GPU, decreasing it from 35ms to 1.32ms.
- Led the design of an innovative HDR flow, specifically tailored for upcoming Premium Tier chips.

Calpion
Lead Software Engineer | Bangalore | Sep 2022 – April 2023

- Performed image segmentation on 3D CT scan images with a focus on carotid and vertebral arteries.
- Designed Convolutional Neural Network (CNN) models using deep learning methodologies to predict amino acid mutations in protein chains.
- Optimized code algorithms and implementation, achieving a speed increase of 30-50%.

GreyScaleAI
Software Engineer | Bangalore | Feb 2021 – Sep 2022

- Developed software to integrate multiple camera types, including X-ray and RGB.
- Built a comprehensive food inspection solution using an X-ray camera, Computer Vision, Deep Learning, and OpenCV.
- Created a fully embedded user interface that manages real-time communication with hardware, software, and user inputs.
- Rectified over 35 bugs within a 4-day period, while concurrently implementing new features and conducting tests.
- Developed a client for MQTT protocol communication.
- Conducted a full code refactoring and enhanced the build process using Cmake.
- Integrated the googletest framework for testing and the glog framework for logging.

XernAI
Founder | Aug 2018 – present

- Developed 'Eevolve', a 2048-style Android game with multiple themes and sprites, using Flutter.
- Created 'BCBR', an Android application for Basic Course in Biomedical Research (BCBR) exam preparation.
- Engineered 'Autodub', a software capable of auto-dubbing videos in any language with lip-syncing.
- Analyzed and classified non-invasively captured brain EEG signals using a g-tec EEG-cap for Brain Computer Interfacing. Trained these signals with a deep neural network to perform brain signal-controlled actions.

Nvidia
System Software Engineer | Pune | July 2017 – July 2018

- Enhanced the Tegra SW platform by developing new features, debugging, and resolving issues within the Camera Imaging pipeline, resulting in an overall improvement of the Imaging software stack.
- Delivered over 10 critical bug fixes in the camera stack, including lens shading and Cuda Histogram, ensuring timely product delivery.

DRDO
Scientist | Dehradun | August 2013 – June 2015

- Implemented solutions to minimize vignetting caused by lens shading in Thermal Imagers (LREO and MREO), enhancing the performance of night vision cameras used in military applications.
- Improved image quality by addressing issues related to bore-sighting, noise, and poor focus in thermal images captured with LREO and MREO.
- Engineered and built a Raspberry Pi-based controller for remote operation of the Thermal Imager. This in-house innovation eliminated the need for external procurement, resulting in cost savings and reduced development time.

North Delhi Power Limited (NDPL) Intern | Delhi | May 2011 – July 2011

- Engaged in the operation and maintenance of power grids, gaining comprehensive knowledge about grid components including towers, cables, SCADA panels, and smart grids. This experience has provided a deep understanding of grid infrastructure and its management.

SKILLS

C++, Python, DeepLearning, Flutter, CT, MRI, DICOM, 3D Modeling (Blender), CMake, OpenCV, PostgreSQL, Qt, Arduino, Git, CVAT

EDUCATION

Masters Of Technology Computer Technology, Indian Institute of Technology Delhi (IIT Delhi) 2017

- **Dissertation**: Conducted an in-depth study on "Thermal Video Stabilization", focusing on the stabilization of videos captured through night vision cameras.
- **Project on Brain Computer Interfacing** that utilized Motor Imagery signals captured via EEG to control cursor movement on the screen. This innovative approach demonstrated the potential of brain-computer interfaces in real-world applications.

Bachelors Of Technology Electrical Engineering, Indian Institute of Technology Mandi (IIT Mandi) 2013

- **Thesis**: Conducted comprehensive research on an "Automobile Collision Prevention System", focusing on enhancing vehicle safety.
- **Founding Member, Robotics Section, IIT**: Pioneered the establishment of the Robotics Section at IIT, leading the construction of the first robot at IIT Mandi from the ground up.
- **Member, Electronics Section**: Actively participated in the Electronics Section, contributing to various projects and discussions.
- **Scholarship**: Awarded the Merit Cum Means Scholarship in recognition of academic excellence.

CERTIFICATES / SPECIALIZATIONS

Entrepreneurship Specialization, The Wharton School (2021-2022)
Completed a comprehensive five-course series on entrepreneurship, covering the inception, design, organization, and management of new enterprises. The curriculum was designed to guide learners from opportunity identification through launch, growth, financing, and profitability.

Deep Learning Specialization, Deeplearning.ai (2018-2019)
Acquired foundational knowledge of Deep Learning, including an understanding of Convolutional Networks, Recurrent Neural Networks (RNNs), Long Short-Term Memory (LSTM), and more.

TensorFlow Developer Professional Certificate, Deeplearning.ai (2019-2020)
Gained proficiency in TensorFlow, with a focus on understanding loss functions, optimizers, convolutions, LSTM, and more.

ACTIVITIES

- Led and organized a workshop on Mobile Autonomous Robotics at IIT Mandi.
- Participated in a workshop on Swarm Robotics at Thapar University.
- Coordinated multiple events at Cognizance 2009 at IIT Roorkee.

ACCOMPLISHMENTS

- Achieved a GRE score of 321/340, with a perfect score of 170/170 in the Quantitative section.
- Secured an IIT JEE rank of 3547 among 0.4 Million students.
- Attained a GATE rank of 423 (99.998 percentile) in Electronics and Communication.
- Ranked among the top 0.1% of students in India in the XII board exams (AISSCE), scoring 100% in Mathematics and 99% in Computer Science.

PSYCHOMETRIC

- **MBTI** Personality Type: INTJ-T, characterized as The Architect, Analyst, and Constant Improvement.
- **Enneagram** Type: 6w5, known as “The Guardian = Loyalist wing Investigator”.
- VIA Character Strengths: Creativity (1), Honesty (2), Perspective (3), Good Judgment (4), and Curiosity (5).