**Anshay Agarwal**

LinkedIn: <https://www.linkedin.com/in/anshayagarwal>

Profile: <https://anshay.github.io/>

Projects: <https://anshay.github.io/projects>

[anshayagr@gmail.com](mailto:anshayagr@gmail.com)

+91-8800472674

**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.

**High Alpha Innovation** Software Consultant | Gurgaon | Nov 2020 – Jan 2021

* Executed cattle segmentation using an FPN network, achieving a 0.96 IOU. Successfully obtained cattle measurements on RGB and LIDAR depth images, utilizing ROS channels for communication.
* Engineered an algorithm to detect the presence, absence, and incoming movement of cattle in both RGB and depth images.
* Utilized CVAT for efficient image labeling.

**XernAI** Founder | Aug 2018 – present

* Developed ‘[Eevolve](https://play.google.com/store/apps/details?id=com.xernai.eevolve)’, a 2048-style Android game with multiple themes and sprites, using Flutter.
* Created ‘[BCBR](https://play.google.com/store/apps/details?id=com.xernai.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).