Anshay Agarwal

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ABOUT ME

I am a creative and curious technologist interested in the novel technologies that help the society and quality of life, like Medical Imaging, Neurotechnology, Robotics, Computer Vision, Drones. I am detail oriented and possess strong analytical skills.
Having coordinated with various teams across multiple time zones, I have developed skills to effectively communicate. As ambitious as I am, I am always learning and developing skills to march forth in my career.

EXPERIENCE

Calpion

Lead Software Engineer | Bangalore | Sep 2022 – present

- Image segmentation of carotid and vertebral arteries in 3D volume of CT scan images
- Designed Deep learning CNN models to predict mutations of amino acids in a protein chain
- Refactored existing code to achieve 30-50% speedup on complete pipeline on AWS

GreyScaleAI

Software Engineer | Bangalore | Feb 2021 – Sep 2022

- Lead a team of 8 Engineers in building advanced food inspection solution using computer vision on Xray images end to end from acquisition to UI
- Collaborated with the CTO, VPs and Managers
- Collaborated with test Engineers to design, implement and perform software tests
- Designed and architect the software for handling and merging results from multiple cameras (xray, RGB)
- Developed complete embedded UI – stacked at the heart of software pipeline running on the edge machine handling real time communication with hardware, software and user inputs
- Delivered 50+ new features and bug fixes within a week for rapid delivery of product to customers like Nestle
- Interviewed 20+ candidates including 4 who held 25+ years of experience.

Xern AI

Founder | Aug 2018 – Feb 2021

Xern comes from Xerneas meaning life. Xern AI, utilizes the state of the art AI to help improve the quality of life. With this vision, it was launched with developing Brain Computer Interfacing for elders to help them control robotic supports with their brain waves.
It also embarked in making the entertainment content accessible around the world at the same time in the local languages.

- Autodub – Developing a software that can automatically dub a video in any language and perform lip syncing.
- Brain Computer Interfacing – Analyzed and classified brain EEG signals captured non-invasively from the scalp using g-tec EEG-cap to perform actions controlled by the brain signals. Signals were epoched and trained using a deep neural network.

Nvidia Graphics

System Software Engineer | Pune | July 2017 – July 2018

- Implemented features and bug fixes for Imaging Software stack for Tegra Camera for Jetson boards on Lens Shading, Cuda histogram, 3A algorithms, Bayer demosaicing.
- Wrote and reviewed technical documentation.
- Reviewed peer code.
- Coordinated with customers across the globe to understand new feature requirements and deliver best fitting solution.

Defense Research and Development Organization (DRDO)
Scientist | Dehradun | August 2013 – June 2015

- Image processing and image improvement of night vision thermal cameras that could see up to 40kms in dark
- Reduced the vignette artifacts occurring due to lens shading
- Improved bore-sighting, noise and poor focus in the thermal images
- Designed and developed Raspberry Pi based Thermal Imager controller for operating the gimble camera platform

SKILLS

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

EDUCATION

Master of Technology (M.Tech.)
Computer Technology
Indian Institute of Technology Delhi (IIT Delhi)
New Delhi | 2017

- Dissertation: Thermal Video Stabilization, which stabilizes a video captured through night vision camera
- Project on Brain Computer Interfacing which involved moving a cursor on the screen using Motor Imagery signals captured via EEG

Bachelor Of Technology (B.TECH.)
Electrical Engineering
Indian Institute of Technology Mandi (IIT Mandi)
Mandi, HP | 2013

- Thesis: Automobile Collision Prevention System
- Founded Robotics Section of IIT and built 1st robot of IIT Mandi from scratch that won 2nd prize in competition IIT Delhi.
- Member of Electronics Section
- Recipient of Merit Cum Means Scholarship

CERTIFICATES / SPECIALIZATIONS

Entrepreneurship
The Wharton School (2021-2022)
Wharton's Entrepreneurship Specialization covers the conception, design, organization, and management of new enterprises. This five-course series is designed to take one from opportunity identification through launch, growth, financing and profitability

Deep Learning Specialization
Deeplearning.ai (2018-2019)
Foundations of Deep Learning and understanding of Convolutional networks, RNNs, LSTM, etc

Modern Robotics
Northwestern University (2020-2023)
This Specialization provides a rigorous treatment of spatial motion and the dynamics of rigid bodies, employing representations from modern screw theory and the product of exponential formula and to apply these tools to analysis, planning, and control of robot motion.

TensorFlow Developer Professional Certificate
Deeplearning.ai (2019-2020)
A grounding to start with TensorFlow, detailing on understanding of loss functions, optimizers, convolutions, LSTM, etc.

ACTIVITIES

- Organized and managed workshop on Mobile Autonomous Robotics at IIT Mandi
- Workshop on Swarm Robotics at Thapar University
- Organized multiple events at Cognizance 2009 at IIT Roorkee

ACCOMPLISHMENTS

- GRE Score- 321/340 (170/170 in Quantitative)
- IIT JEE Rank - 3547 (~0.4 million students)
- GATE Rank - 423 (99.998 percentile) in Electronics and Communication
- Among top 0.1% students of India in XII board exams (AISSCE) in Mathematics (100%) and Computer (99%)