

Vinay Chandragiri

 me@vc-7.com  iamvc7  EEA/UK/CH/IN  Dublin, Ireland

EDUCATION

Master of Science, Trinity College Dublin Dublin, Ireland
Majoring Intelligent Systems in Computer Science - 2:1 Honors 2017–2018
Bachelor of Technology, Indian Institute of Technology (IIT) Guwahati Guwahati, India
Majoring Computer Science & Minor in Product Design - 1:1 Honors 2012–2016

ENGINEERING

Staff Engineer, AI Architecture, AMD Dublin, Ireland
AIE Architecture Group Mar 2024–Present

- Developing pipelines for behavioral modeling of ML Op kernels, including GEMMs with varied precision and nonlinearities based on the architecture, and testing them at the model-level accuracy analysis. Worked on improving the existing CARF flow for a better ONNX graph manipulation for extracting necessary data from the onnx graph.

Machine Learning Engineer, Factory Automation, Intel Ireland Dublin, Ireland
Manufacturing, Supply, Operations and Automation Group (MSOA) Jan 2021–Feb 2024

- Developed a Unified Knowledge Platform (UKP), an AI-powered document ingestion and search platform for factories, ensuring full compliance with Intel security standards. The text extraction module supports various document types including PDFs, Docs, Excel files, PowerPoints, OCR on images, and Intel's custom formats.
- Developed custom NN architectures for Auto-encoders focused on Representation learning and anomaly detection of wafer image data deployed on large scale advanced software (WISTA), a system to process wafer image data running on Intel's private manufacturing cloud.
- Developed POC's using OCR, Image Sticking, Visual Search and various defect identification systems but inline and end of line. Prioritized scaling and maintaining these projects across multiple Intel factories.
- Developed CV based solution for Laser Damage, currently running at scale with a notification system. Developed a Object Detection as a Software (Codeless) for Engineers with effective labelling system and is easily usable.
- 2 out of 4 abstracts accepted at IMEC 2022, An internal manufacturing conference with acceptance rate of **1%**.
- Launched and maintained a holiday management portal, Intelidays for the Fab employees (~6500) who were previously using spread sheets.

Deep Learning Engineer, Intel Movidius Dublin, Ireland
Movidius Advanced Architecture Group Sep 2018–Dec 2020

- Designed a custom Loss function and developed an end to end pipeline using a siamese CNN in order to estimate the relative pose between a pair of Voxel Grids (highly memory efficient (~90%) representation of a point cloud).
"End-to-End Relative Pose Estimation of Point Clouds and Voxel Grids", L. Rodriguez, V. Chandragiri, D. Pena, and D. Moloney at Benchmarking of SLAM Algorithms for Robotics and VR/AR, ICRA 2019. [Paper]
- Developed a low power, memory efficient and high throughput object detection vision system with 200 classes which involves preprocessing and Inference on standalone Movidius Myriad-X for LPIRC 2019.
- Designed and developed a low power ip-camera capable of capturing (MIPI module), compression (Jpeg-decode), Inferencing using NN module (used OpenVino) & sending results (via http) on standalone Movidius Myriad-X.

LEADERSHIP

Technical Project Manager/ The Goto Guy, MSOA, Intel Ireland Dublin, Ireland
Manufacturing, Supply, Operations and Automation Group Jan 2021–Feb 2024

- Led and supervised **9 (Master's & PhD's) interns** using agile over the period of 3 years. Oversaw all day-to-day operations, end to end and assigned tasks and got the best out of them consistently.
- Researched new opportunities and their value propositions by collaborating with a variety of internal stakeholders from other teams and groups at Intel. Demonstrated ability to cultivate, build and maintain strong working relationships across internal teams from multiple geo-locations across MSOA spanning USA, China and Isreal for smooth workflow and collaboration.

- Led entire hiring process of interns/full-time in our group for the past **2.5** years. This involves co-ordinating with various universities across Ireland and Europe for pooling, short-listing, interviewing and finalising the candidates with the team. Liaised with HR, Finance teams during this process.
- Organising a weekly learning forum known as Show & Tell. In this capacity, I oversee all aspects of communication related to the event, ensuring its successful execution for the past **4** years.
- Led the safety and well-being of my team by orchestrating regular ergonomic assessments for the past **3** years.

Incubator Manager, Intel Movidius Dublin, Ireland
 Incubator, Movidius Advanced Architecture Group Jan 2019–July 2020

- Developed and executed strategy for outreach, hunting, attracting and on-boarding of qualified innovative entrepreneurs spanning **~25 start-ups** across all Europe.
- Provided high-quality coaching and advisory support to entrepreneurs on movidius software and hardware. Ensured tight management of milestones and progress of entrepreneurs and their respective start-ups.
- Managed the day to day interactions with the Incubatees, ensured tight management of milestones and progress of entrepreneurs and their respective start-ups.

Mentoring and Teaching - Thinkful & Udacity Remote, Worldwide
 Mentorship Apr 2018–Aug 2022

- I have provided mentorship to a diverse group of over 1000 students across the world, through programs offered by Udacity Nano Degrees and Thinkful Courses. My approach emphasizes empathy, ensuring that students grasp course concepts and can effectively apply them to their projects.

Core Organiser, Events, Techniche Guwahati, India
 The Annual Techno-Management Festival of IIT Guwahati Jun 2013–Jul 2015

- Led a **4** member team with **60** volunteers to organise **9** workshops, **7** lectures and **12** competitions in 2014
- Mentored a **65** member team for a smooth workflow of Events during Techniche in 2015

RESEARCH

Activity Recognition using OpenPose, Google Summer of Code 2018 Remote, Ireland
 Red Hen Lab, Summer Internship May 2018–Aug 2018

- Worked on fine grained activity recognition in videos using *OpenPose*, on MPII Cooking Activities dataset contains 65 cooking activities. Activities are distinguished by fine grained body motions which have high intra-class variance.
- This project constituted a crucial component of a broader initiative focused on leveraging multi-modal gesture recognition techniques.

AI Research Engineer Hyderabad, India
 Reserec, a ML Service based Start-up Aug 2016–Jan 2017

- Implemented Guided search that effectively crops out the region using object for easy querying in Visual Search
- Developed a pipeline for effective Text Recognition in images using available using NLP methods. Worked on Image understanding on the basis of color, texture. Hierarchical tagging of images has been done based on various attributes including colour.

Freelancer: Matching software for Face Identification in Wedding Photos Jan 2017–May 2017, India
Understanding Navigation (SLAM), SRA-2014, The University of Queensland(UQ) Dec 2014–Mar 2015, Australia
Understanding functionality of Neurons by Sensory Integration, SRA-2015, UQ Dec 2015–Mar 2016, Australia
Semi-Supervised Segmentation of Hyper-Spectral Images, B.Tech. Thesis Jan 2016–May 2016, Guwahati, India

SKILLS

-  **Expert:** Python, C/C++, MATLAB, Latex, Git, VSCode, ML, DL, CV, IR, Kubernetes, ELK
-  **Proficient:** SQL, HTML, CSS, JavaScript, AWS/GCP, Java, R, CI/CD, Data Visualization, NLP, SageMaker
-  **Novice** Android Studio, Blender, Unreal Engine, Swift, Angular, React, Node, NodeJS, ElasticSearch

AWARDS

Best Presenter at AI Everywhere Conference, Intel AI; 2nd Place Mar 2022
 Best Pitch Award, Inter University Startup Weekend by Techstars; 1st Place Nov 2017
 All India Ranks (AIR) **4088**- IIT-JEE; **280**- AIEEE & **148**- ISAT; ~1.3 million applicants 2012
 UQ Summer Research Scholarship - 2x & Merit Scholarship, One among 50 Students - 4x recipient 2012-'16