

RISHAV

[LinkedIn](#) | [Email](#) | [GitHub](#) | [Website](#) | [Google Scholar](#)

EDUCATION

JAN 2024-PRESENT	MSc. in COMPUTER SCIENCE Mila - Quebec AI Institute , Montreal, Canada
AUG 2016-AUG 2020	Bachelor of Engineering in COMPUTER SCIENCE Birla Institute of Technology & Science (BITS Pilani) , Pilani, India

WORK EXPERIENCE

<i>Aug 2022-Jan 2024</i>	Co-Founder & CTO at Offside , Bengaluru, India Led the product and tech teams at Offside. Designed the entire system backend (models, caching mechanisms, sockets, etc.) comprising of a real-time prediction system, group chat, reels & a real time scoreboard . Deployed the distributed backend on AWS using AutoScalingGroups , built the entire DevOps pipeline on AWS. Used Elastic Search & Machine Learning to provide fuzzy search capabilities & recommendations. Raised \$300k and scaled the user base to 100k users with an engagement time of over 20 mins. Media: [100x.VC , Crunchbase , Pitchbook]. Stack: AWS (DocumentDB, AutoScalingGroups, CodePipeline, OpenSearch, EC2, Redis), Docker, Python, NodeJS.
JAN 2021-AUG 2022	Research Engineer at DFKI , Kaiserslautern, Germany Contributed significantly to two major industry projects: Spot Spraying with Hydac and Post OCR Localization with Insiders Tech , from inception to production. In the Spot Spraying project, developed an algorithm for deployment on an Edge-robot for detecting and localizing weeds and crops for effective use of weedicides/fertilizers. The project involved development of the algorithm, optimization, quantization and final deployment in a robot with Yocto linux and Hailo chip. In the Post-OCR project, created a dataset and then trained a model to refine OCR box predictions by transforming the problem to object detection paradigm. Stack: Python, C++, Libtorch, PyTorch, Tensorflow, Yocto Linux, Hailo, TensorRT. Reference: Prof. Dr. Didier Stricker
JULY 2020-JAN 2021	Software Engineer at WELLS FARGO , Hyderabad, India Built a real-time dashboard for monitoring of ETL jobs involving several terabytes of Wells Fargo's everyday financial data, a task that was done manually previously - the dashboard helped in quick decision making and localizing critical issues. Lead multiple version transfer projects including that of Wells Fargo's trading software.
MAY 2019-DEC 2019	Research Intern at DFKI , Kaiserslautern, Germany Worked on Deep Learning for Scene Flow Estimation in Autonomous Vehicles under Prof. Dr. Didier Stricker for my bachelor thesis, parts from the work were accepted at ICPR-2020 & IROS-2020. Reference: Prof. Dr. Didier Stricker
AUG 2018-APRIL 2019	Researcher at Pixxel , Bengaluru, India Worked on using time series hyper spectral imagery to predict crop yields. Discussed and presented our work at ISRO.

PUBLICATIONS

IROS 2020	DeepLiDARFlow: A Deep Learning Architecture For Scene Flow Estimation Using Monocular Camera and Sparse LiDAR. Rishav*, Ramy Batrawy*, René Schuster, Oliver Wasenmüller, and Didier Stricker
ICPR 2021	ResFPN: Residual Skip Connections in Multi-Resolution Feature Pyramid Networks for Accurate Dense Pixel Rishav*, Ramy Batrawy*, René Schuster, Oliver Wasenmüller, and Didier Stricker

SKILLS

LANGUAGES	Python, C++, Javascript.
FRAMEWORKS	Tensorflow, PyTorch, JAX, NodeJS, Redis, AWS, GCP, Docker, TensorRT.
REVIEWER	TPAMI, IROS, ICPR.

ACADEMIC PROJECTS

DEEPLIDARFLOW	Monocular camera and sparse LiDAR for scene flow. Bachelor thesis; worked on scene flow estimation using monocular camera & sparse LiDAR, work from the thesis has been accepted at two conferences. [Code]
CYCLEGAN STEREO	Cross spectral stereo matching PyTorch implementation of the paper [Unsupervised Cross-spectral Stereo Matching by Learning to Synthesize] The method uses CycleGAN to learn translation from one spectrum to the other and then uses it to train a stereo matching network based on unsupervised losses. [Code]
GANVO	Visual odometry for estimating depth Unofficial pytorch implementation for GANVO - it uses visual odometry for estimating depth. This work remains one of the very few GAN based work on visual odometry. [Code]
HSID-CNN	Cleaning Hyperspectral Images Worked on Deep Learning for cleaning and extraction of useful bands in hyperspectral images, Implemented HSID-CNN in tensorflow for denoising hyperspectral images (AVIRIS). [Code]
COMPILER	Compiler for a language specification in C Constructed a compiler for a given language specification in C language, this included the development of lexer, parser, semantic-analyzer, code-generator. [Code]
SHM	Structural Health Monitoring using time series data. Implemented an auto-regressive model for feature extraction from time series sensor data used those features on several unsupervised algorithms like one-class SVM for final health classification. [Code]

AWARDS

2024	Awarded a scholarship of \$33000 per year to pursue graduate studies at Mila.
2022	Selected to IEEE RAS Young Reviewers Program.
2016	Obtained 99.90 percentile in JEE Mains, a test taken for entrance to premier Indian Institutes by 1.2 million students.
2014	Awarded the prestigious NTSE scholarship in 2014.