

BENEDICT FLORANCE AROCKIARAJ

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EDUCATION

National Institute of Technology, Tiruchirappalli, India

July 2016 - July 2020

B. Tech. (Honors) | Computer Science and Engineering | CGPA: **9.49/10** | **2nd/104** students

Core Courses: Data Structures, Algorithms, OS, DBMS, Networking Protocols, Computer Architecture, Compilers

Electives: Probability, Machine Learning, Artificial Intelligence, Image Processing, Data Mining, Soft Computing

Independent: Deep Learning Specialization (*Coursera*), CNNs for Visual Recognition (*Stanford Online*)

Montfort School, Trichy

June 2014 - May 2016

Class XII (CBSE AISSCE) | Computer Science | **96.8%** | *District Topper* | *Best Outgoing Student*

Class X (CBSE AISSE) | CGPA: **10/10**

SKILLS

Languages: C/C++ • Javascript • Python

Web Development: HTML • CSS • Angular • PHP • Laravel • SQL

Tools and Framework: PyTorch • Tensorflow • Git

PROJECTS

Areas of Interest: Machine Learning • Deep Learning • Computer Vision • Software Development

Unsupervised 3D Human Pose Estimation

May 2020- Present

Guide: Prof. Dr. R. Venkatesh Babu | VAL Lab, IISc, Bangalore

- Working on a kinematic-structure-preserved unsupervised 3D pose estimation framework to effectively disentangle pose, foreground and background appearance information on Human3.6M, MPI-INF-3DHP, LSP, Youtube and 3DPW datasets

Ensemble-based Endoscopy Artefact Detection

Jan 2020 - May 2020

Guide: Prof. Dr. R. Leela Velusamy | NIT, Trichy

- Achieved an mAP of 0.3405 by proposing an ensemble of RetinaNet-based object detectors to localize bounding boxes and predict eight artefact classes that generalizes to inter-patient, multi-tissue and multi-modal corpus of endoscopy video data

Unsupervised Deep Domain Adaptation for Object Detection

May 2019 - Aug 2019

Guide: Prof. Dr. Eric Granger | LIVIA, ETS, Montreal, Canada

- Analyzed how local features, distribution gap metrics and temporal information from trackers can be leveraged in generalizing unsupervised domain adaptation approaches to perform effectively on face-detection datasets like SCUT and Widerface

Highlights Generation for Broadcast Cricket Videos

Sept 2018 - Dec 2018

Guide: Prof. Dr. E. Sivasankar | NIT, Trichy

- Employed video frame segmentation, replay and scoreboard detection on our newly constructed dataset of IPL cricket videos. Studied the real-world implementation by interviewing the CEO of Chennai Super Kings and other domain experts

Indian Flora Project

May 2018 - July 2018

Guide: Prof. Dr. C. V. Jawahar | CVIT, IIIT, Hyderabad

- Achieved a top-5 precision of 96.90 by transfer learning on various CNN models using our Indic-Leaf dataset of 112 plant species for plant identification and disease detection. Deployed a plant species querying web-portal using Angular and NodeJS

MDecoder

Feb 2018 - April 2018

Pragyan, the technical festival of NIT Trichy | Spider, NIT Trichy

- Developed the online math challenge MDecoder in Angular and Laravel environments by using foolproof algorithms for authentication, time-based scoring, question generation and submission validation that witnessed over 1000 participants

Electric Multiple Unit (EMU) Production Application

Dec 2017 - Feb 2018

Indian Railways | Integral Coach Factory, Chennai

- Built the backend for digitizing the records of inventory management and production planning for the coaches and rakes. Wrote APIs in Laravel to handle authorization across Web and Android clients used by over 500 employees of ICF, Chennai

LEADERSHIP AND EXTRA-CURRICULARS

- Led 60+ members of the Workshops and Informals team of **Festember**, the cultural festival of NIT Trichy and chaired the **Rolling Reels Film Festival**, thereby engaging a footfall of 15,000 students from 250+ institutes across India (2019)

- Active member of the web-team and ML group of **Spider**, the research and development club of NIT Trichy (2017-2020)

- Taught school children from marginalized communities at **Illuminate**, a government-certified charitable trust (2017-2020)

- Served as the **Institute Student Mentor**, organizing orientation events and mentoring the institute freshmen (2017)

AWARDS

- Received the prestigious **Vector Scholarship in Artificial Intelligence** from the Vector Institute, Toronto (2020)

- Secured the coveted **Mitacs Globalink Research Internship** award to perform research at LIVIA, ETS Montreal (2019)

- Awarded the **Indian Academy of Sciences' Research Fellowship** to conduct research at CVIT, IIIT-Hyderabad (2018)

- Placed as one of 20 semi-finalists from India for the **Cargill Global Scholars Program** for leadership development (2018)