

BENEDICT FLORANCE A

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EDUCATION

National Institute of Technology, Tiruchirappalli, India

B.Tech (Hons.) in Computer Science and Engineering

Minor in Economics

July 2016 - Present

CGPA: **9.48/10**

Montfort School, Trichy

Class XII All India Senior School Certificate Examination 2016

Class X All India Secondary School Examination 2014

May 2016

96.8%

CGPA: **10/10**

AREAS OF INTEREST

Machine Learning, Deep Learning and Computer Vision

SCHOLASTIC ACHIEVEMENTS

- Recipient of the prestigious **Mitacs Globalink Research Internship Award - 2019** to work under Prof. Dr. Éric Granger at École de technologie supérieure, Montréal (Université du Québec).
- Recipient of the prestigious **Indian Academy of Sciences' Summer Research Fellowship - 2018** to work under Prof. Dr. C. V. Jawahar at International Institute of Information Technology, Hyderabad.
- Currently **ranked** among the **top 5** of the **104 students** in the CSE Department, NIT Trichy.
- Awarded the **Google India Challenge Scholarship** for the Mobile Web Specialist track.
- Among the 20+ **semi-finalists** from India for the **Cargill Scholars Program** for leadership development.
- Secured **first place** in the district of Trichy in the CBSE Class XII **AISSCE** 2016.
- Awarded the **Best Outgoing Student** of Montfort School, Trichy for the academic year 2015-16.

RESEARCH EXPERIENCE AND PROJECTS

Domain Adaption for Object Detection

Guide: Prof. Dr. Éric Granger

May 2019 - Present

ETS, Montreal

- Developing a new strategy for domain adaption in object detection.

Highlights Generation and Player Analysis for Cricket Videos

Guide: Prof. Dr. Rajeswari Sridhar

September 2018 - Present

NIT, Trichy

- Generating game highlights, individual player highlights and player analysis for broadcast cricket videos.

Indian Flora Project: Social Image Data Based Plant Species Identification and Disease Detection using Deep Learning

Guide: Prof. Dr. C. V. Jawahar

May 2018 - July 2018

IIT, Hyderabad

- Employed various CNN architectures on ImageNet, PlantCLEF datasets on our robust dataset of 100 Indian plant species with experimental observations showing efficient computation time and high top-5 precision.
- Deployed a collaborative web-portal using Angular and NodeJS and an Android mobile application where users can add new observations to the catalogue and query for species identification.

MDecoder

Pragyan, techno-managerial festival of NIT Trichy

Feb 2018 - April 2018

Spider, NIT Trichy

- Developed the online mathematical challenge MDecoder, where contestants answer math questions of different difficulty levels. Built the webapp using ReactJS, Laravel and hosted in Docker-based environment.

Last Updated: 1st March 2019

- Implemented efficient, foolproof algorithms for authentication, time-based scoring, question generation and submission validation. The contest witnessed over 500+ contestants and 25,000+ submissions.

Web Development Intern

Indian Railways

Dec 2017 - Feb 2018

Integral Coach Factory, Chennai

- Developed the backend for digitizing the records of inventory management and production planning for the coaches and rakes. Wrote API's in Laravel to handle authorization across Web and Android clients. The Android app has been released on Google Play Store ([Link](#)) and is used by 500+ employees of ICF, Chennai.

Smart Health Care System

Guide: Prof. Dr. E. Sivasankar

Oct 2017 - Dec 2017

Pragyan Hackathon, Bangalore

- Implemented machine learning models to predict disease risks based on user symptoms as a collaborative pipeline between doctors and patients and built a recommendation system for analyzing the abnormal parameters and recommending future course of action. Wrote APIs for the associated Android application.

RELEVANT COURSES

- **Computer Science** - Elements of Computing Systems, Basics of Programming, Discrete Structures, Data Structures, Digital Systems Design, Programming Languages, Computer Organization, Combinatorics and Graph Theory, Operating Systems, Data Communications and Networks, Automata and Formal Languages, Algorithms, Computer Architecture, Internetworking Protocols, DBMS, Software Engineering, Distributed Algorithms, Cryptography, Microprocessors and Microcontrollers, Mobile Applications Development, Data Warehousing and Data Mining, Machine Learning, Soft Computing
- **Mathematics** - Higher Engineering Mathematics, Probability Theory, Principles of Operations Research
- **Economics** - Principles of Economics, Basic Econometrics, Forecasting in Macroeconomics and Finance
- **Independent Coursework** - Machine Learning (*Stanford University/Coursera*), Computer Vision (*Mubarak Shah/Youtube*), Machine Learning with TensorFlow (*Coursera*), CNNs - CS231N (*Stanford Online*)

TECHNICAL STRENGTHS

Languages, Software and Tools	C/C++, Python, JavaScript, git, MATLAB, GNU Octave, L ^A T _E X
Libraries	TensorFlow, Pytorch, NumPy, Scikit-Learn
Web Development	HTML, CSS, Angular, PHP, Laravel, Node.js, MySQL, MongoDB

POSITIONS OF RESPONSIBILITY AND EXTRACURRICULARS

- **Machine Learning Enthusiast and Web Developer**, *Spider, the Research and Development club*: Built the institute websites for mess and hostel room allocation and tech-fest contests. Involved in interdisciplinary research projects, knowledge sharing sessions, hackathons, coding contests and open-source projects.
- **Instructor and Organizer**, *Technical Workshops*: Conducted introductory web and game development, machine learning workshops to the institute freshmen and students from various institutes across the state.
- **Head, Workshops and Informals**, *Festember, the cultural festival of NIT Trichy*: Leading a team of 80 members to organize workshops, informal events and South India's largest student-run short film festival "Rolling Reels Film Festival" engaging a footfall of over 10000 students from 250+ institutes across India.
- **Head, Guest Lectures**, *Vortex, the technical symposium of CSE department*: Organized a unique line-up of guest lectures from eminent personalities of the IT industry on the recent advances in computer science.
- **Institute Student Mentor**, *Orientation Team*: Organized orientation events and lectures by eminent personalities for 900+ freshmen, mentored 10 freshmen helping them get accustomed to the institute life.
- **Instructor and Volunteer**, *Illuminate*: a government-certified charitable trust whose aim is to provide a wholesome education in Math, English and Moral Values to children from marginalized communities.
- **Volunteer**, *National Service Scheme(NSS)*: Completed two years of social service through plantation drives, awareness campaigns and orphanage visits.