BENEDICT FLORANCE A

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EDUCATION

National Institute of Technology, Tiruchirappalli, India   July 2016 - Present
B.Tech (Hons.) in Computer Science and Engineering   CGPA: **9.49/10**
Minor in Economics

Montfort School, Trichy   May 2016
Class XII *All India Senior School Certificate Examination 2016*   **96.8%**
Class X *All India Secondary School Examination 2014*   CGPA: **10/10**

AREAS OF INTEREST

Machine Learning, Deep Learning and Computer Vision

SCHOLASTIC ACHIEVEMENTS

- Recipient of the prestigious **Indian Academy of Sciences' Summer Research Fellowship - 2018** to work under Prof. Dr. C. V. Jawahar in the field of computer vision and deep learning at IIIT - Hyderabad.
- Currently **ranked 2nd** among 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.
- Among the **top 1%** of the students who wrote the National Standard Exam in Physics and Chemistry.
- Selected for the **Inspire Science Internship** organized by the Dept. of Science and Technology, Delhi.

RESEARCH EXPERIENCE AND PROJECTS

Highlights Generation and Player Analysis for Cricket Videos   September 2018 - Present
Guide: Prof. Dr. Rajeswari Sridhar   *NIT, Trichy*

- Generating game highlights, individual player highlights and player analysis for broadcast cricket videos using computer vision and deep learning algorithms.

Indian Flora Project: Social Image Data Based Plant Species Identification and Disease Detection using Deep Learning   May 2018 - July 2018
Guide: Prof. Dr. C. V. Jawahar   *IIIT, Hyderabad*

- Employed various CNN architectures by iterating through different parameters trained from-the-scratch, fine-tuned on ImageNet, PlantCLEF datasets on our robust dataset of 100 Indian plant species.
- Experimental observations show efficient computation time and high top-5 precision of 99.85%.
- 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   Feb 2018 - April 2018
Pragyan, techno-managerial festival of NIT Trichy   *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.
- 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 | Dec 2017 - Feb 2018
Indian Railways | *Integral Coach Factory, Chennai*

· Developed the backend service 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 code was reviewed and pushed to production. The Android application has been released on Google Play Store (Link) and is used by more than 500 employees of ICF, Chennai for internal purposes.

Smart Health Care System | Oct 2017 - Dec 2017
Guide: Prof. Dr. E. Sivasankar | *Pragyan Hackathon, Bangalore*

· Implemented machine learning models to predict disease risks based on user symptoms and lifestyle inputs as a collaborative pipeline between doctors and patients. Used web-scraped data for training the model.

· Built a recommendation system for analyzing the abnormal parameters and recommending future course of action like medicines and wrote APIs for the Android application where the features were deployed.

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

· **Mathematics** - Higher Engineering Mathematics, Probability Theory, Principles of Operations Research

· **Economics** - Principles of Economics, Basic Econometrics

· **Independent Coursework** - Machine Learning *(Stanford University on Coursera)*, Deep Learning Specialization *(Coursera)*, Computer Vision *(Georgia Tech on Udacity)*, Machine Learning with TensorFlow on Google Cloud Platform *(Coursera)*, CNNs for Visual Recognition *(Stanford University Online)*

Technical Strengths

Programming Languages	C/C++, Python, JavaScript
Libraries	TensorFlow, Pytorch, NumPy, Scikit-Learn
Software and Tools	git, MATLAB, GNU Octave, LaTeX
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.

· **Marketing Coordinator**, *Vortex, the technical symposium of CSE department*: Contacted renowned brands and organizations to collaborate with Vortex and obtain corporate sponsorship and funding.

· **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.

Last Updated: 25th December 2018