Abel S. Augustine

Graduate Student in Computer Science at UIC, Intel Student Ambassador & Data Scientist at Datacubes Inc.

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Education

M.S. in Computer Science   *Chicago, USA*

University of Illinois Chicago   *August 2017 - December 2018*

- Working on a research project in the field of medical imaging to determine the existence of correlation between heart disease and erythrocyte flow in the eye's blood vessels using computer vision and machine learning.
- Developing an AI based company in the field of ecommerce as part of a course. Involved in developing the product map, market strategy and developing recommendation systems of various types.
- Designed an Aspect based Sentiment Analysis system that beats state of the art accuracy using a stacked combination of TD-LSTM/Attention based LSTM with an improved word vector along with other classical machine learning models.
- Created an application that learns human behavior in an environment. Applied it to learn driving from F1 2017 game.
- Worked with the company, Explorer.ai to create deep learning models in the context of 3D mapping for self driving cars. Performed real-time traffic sign detection.
- Gave a 2+ hour talk on computer vision and classification and detection problem. Experimented across various NLP problems and implemented recent research papers.
- Developed solutions for Kaggle problems like Otto Product Classification and Young People Empathy Prediction using various statistical analysis, data preprocessing, and classical models.

B.Tech. in Electronics and Communication Engineering   *Karnataka, India*

National Institute of Technology, Karnataka   *July 2011 - May 2015*

- Developed a real-time low-cost portable OCR system aimed at allowing visually challenged people to read printed text.

Technical Skills

General Programming	Python, Swift, C/C++, Java
Machine Learning	scikit-learn, opencv, Keras, nltk, TensorFlow, R, MATLAB, PowerBI, Tableau, Netica - Probability & JESS
Database	SQL & Neo4J (CYPHER)
Web	Flask, HTML5, Javascript, CSS, AngularJS, Spring
Mobile Development	iOS, Android & Apache Cordova

Relevant Work Experience

Datacubes Inc.   *Chicago, USA*

Data Science Intern   *May 2018 - Present*

- Re-engineered the entire OCR product pipeline from scratch to handle insurance related documents using image processing, deep learning and other machine learning techniques.
- Made use of computer vision techniques with opencv to perform various preprocessing steps resulting in higher accuracy.
- Designed a novel high accuracy word detector algorithm that is used to find missing words for finer recognition.
- Developing post-processing for OCR output using text proposal networks.

Emirates Innovation Lab, Emirates Group   *Dubai, U.A.E*

Software Engineer - Innovation (Data Science and AI)   *July 2015 - July 2017*

- Initiated and co-developed the 'CogniFace' platform - a face recognition platform based on CMU Open Face. Also developed use cases built around this platform like a system similar to Amazon Go, presence monitoring, reminder prompting etc.
- Worked on 'Predictive Capping' project predicting agent fraud using time series modelling and regression models. Obtained an accuracy of upto 91% with booking data saving the company 6 million dollars every year.
- Led the R&D for a vacation recommender architecture using machine learning and graph networks.
- iOS Team Lead and Developer for 'Skywards'. Led a team of 5 and developed a production level non-trivial iOS app on Swift.
- Full stack developer on 'Skywards Engagement Platform'. Developed a social media system through Neo4J, a graph database (using CYPHER Query Language). Involved in writing the REST services on Spring Boot (Java Spring Framework).
- Developed hybrid applications for mobile and Web using Cordova and Angular JS.

Awards & Achievements

2018	**Top 5 Finalist**, US Soccer Hackathon	*Chicago, U.S.A*
2017	**First Prize**, Emirates-Carnegie Mellon University Data Science and AI Hackathon	*Santa Clara, U.S.A*
2016	**Ready to Take-Off Prize**, IATA NDC Hackathon	*Dubai, U.A.E*
2015	**3rd Place**, iOTx Hackathon	*Dubai, U.A.E*
2015	**Finalist**, Intel IOT Roadshow Hackathon	*Bangalore, India*