Prabh Simran Singh Baweja

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EDUCATION

CARNEGIE MELLON UNIVERSITY
MASTERS IN ELECTRICAL AND COMPUTER ENGINEERING
Aug 2019 - Present

IIIT HYDERABAD
BACHELORS OF TECHNOLOGY IN COMPUTER SCIENCE
2012 - 2016
Dean's Merit List (Fifth Semester)

LINKS

Website: https://prabh27.github.io
Github:// **prabh27**
LinkedIn:// **prabhbaweja**

ACHIEVEMENTS

• 2019: Technical Talk on Intelligent Stock Market Gamification Models at CMU Tech Summit, Bangkok.
• 2018: **Technical Talk on Chatbots in the Travel Industry** at PyCon Poland, and FullStack Fest Barcelona.
• 2016: Award of Honor from the Chief Minister of Himachal Pradesh, India.

COURSEWORK

•Research and Innovation
•Convolutional Neural Networks
•Deep Learning
•Machine Learning
•Computer Systems
•Data Structures

SKILLS

Programming Languages
C++ • Java • Python
Tools/Libraries/Platforms
Numpy • Pandas • Git • FastAI
Docker • GCP • Kubernetes
LaTeX • Tensorflow
Others
HTML/CSS • MySQL

RESEARCH

INVENTORY FLOW | RESEARCH ASSISTANT
Aug 2019 - Present   Online Learning, Cross Training
- Advised by Dr. Pei Zhang (CMU), and Dr. Hae Young Noh (Stanford).
- Created synthetic datasets for generalization and auto-annotation.
- Developed models based on FasterRCNN architecture for pallet detection, a tracker using 3D Cross View Tracking, and a model to count the pallets using geofencing at each warehouse.
- **Achieve 90% daily accuracy at two warehouses. The system is currently being deployed at 20 warehouses.**

SKYGLOW | RESEARCH ASSISTANT
May 2020 - Aug 2020   Image Processing, Map Projection
- Advised by Professor Diane Turnshek (CMU), Professor Chris Kyba (GFZ).
- Developed an algorithm to define a cloud mask on visible band nighttime imagery from space by the Luojia-1 satellite.

INTELLIGENT STOCK MARKET | ML ENGINEER
Aug 2019 - Dec 2019   Personalized Learning, Gamification
- Integrated Gamification with Personalized Learning Experience Engine composed of Feature Selection and Investor Classification techniques.
- **Presented a Poster at CMU Tech Summit, Bangkok.**

EXPERIENCE

AIFI | RESEARCH INTERN
Aug 2020 - Present | Remote   Vision Product Prediction
- Working on improving the performance of the vision model in terms of accuracy and training speed.
- Pipelining end-to-end vision product recognition workflows for rapid and reliable experimentation.

BOOKING.COM | SOFTWARE DEVELOPER
Jun 2017 – Aug 2019 | Amsterdam   Contextual Linguistic Analysis
- Developed a Contextual Linguistic Analysis model to provide semantic context for the for Booking.com Chatbot.
- Gave technical talks on **Chatbots in the Travel Industry** at Poland, Barcelona.

CODENATION | SOFTWARE DEVELOPER
Jun 2016 - Apr 2017 | Bangalore, India   Program Synthesis
- Implemented an automated refactoring system that modularizes 30-40% of duplicate code cases - a 7-fold improvement from the state of the art.
- **The patent is currently under review.**

ACADEMIC PROJECTS

• **Decision Trees**: Implemented a Decision Tree from scratch using Python.
• **Logistic Regression**: Implemented Logistic Regression from scratch using Python.
• **Proxy server**: Implemented an HTTP proxy server to serve multiple HTTP GET requests from clients concurrently using threads in C.
• **Malloc allocator**: Developed a heap allocator in C using segregated lists of free blocks together with least internal fragmentation.