

Prabh Simran Singh Baweja

pbaweja@andrew.cmu.edu | +66-824373136

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
- Cloud Computing
- Data Structures

SKILLS

Programming Languages

C++ • Java • Python

Tools/Libraries

Numpy • Pandas • Git • FastAI

Docker • \LaTeX • Tensorflow

Others

HTML/CSS • MySQL

RESEARCH

INVENTORY FLOW | CyLAB, CMU

Aug 2019 - Present

Online Learning, Cross Training

- Advised by Professor Pei Zhang (CMU), Professor Hae Young Nou (Stanford), we are working on accurate tracking of items entering/exiting a warehouse.
- We propose Multi Camera Cross Training to continuously improve the model performance for various locations. **We achieve 90% daily accuracy at one warehouse. The system is currently being deployed at 20 warehouses.**

INTELLIGENT STOCK MARKET | CMU & SEC

Aug 2019 - Dec 2019

Gamification, Personalized Learning

- In Collaboration with SEC Thailand, the project aims at increasing the awareness of citizens towards common scams in the country.
- We integrated Gamification with Personalized Learning Experience Engine composed of Feature Selection and Investor Classification techniques. **Presented a Poster at CMU Tech Summit, Bangkok.**

SKYGLOW | CMU & GFZ

May 2020 - Present

Image Processing, Data Projection

- Advised by Professor Diane Turnshek (CMU), Professor Chris Kyba (GFZ), we are developing an algorithm to define a cloud mask on visible band nighttime imagery from space by the Luojia-1 satellite.

EXPERIENCE

BOOKING.COM | SOFTWARE DEVELOPER

Jun 2017 - Aug 2019 | Amsterdam

Contextual Linguistic Analysis

- Developed a Contextual Linguistic Analysis technique to provide semantic context for the Intent Classification model of Booking.com Chatbot. Gave a **Technical Talk on Chatbots in the Travel Industry** at Poland and Barcelona.

CODENATION | INNOVATION ENGINEER

Jun 2016 - Apr 2017 | Bangalore, India

Code Analysis

- Implemented an automated refactoring system that automatically modularizes 30-40% of duplicate code cases - a 7-fold improvement from state of the art. **The patent is under review.**

CODECOMBAT | OPEN SOURCE CONTRIBUTOR

Feb 2014 - Dec 2014 | Hyderabad, India

Game Development

- Contributed to the Open Source Community by developing games for novice programmers to teach them basics of programming constructs, data structures, algorithms. **The games have been played by over a million users.**

OTHER PROJECTS

- **Proxy server:** Implemented an HTTP proxy server to serve multiple HTTP GET requests from clients concurrently using threads in C.
- **Shell simulator:** Simulated the functionality of a signal-safe shell in C to handle foreground, background and builtin jobs.
- **Malloc allocator:** Developed a heap allocator in C using segregated lists of free blocks together with least internal fragmentation.