# Prateek Chanda

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## Education

**Indian Institute of Engineering Science and Technology, Shibpur** — Howrah, India

*Bachelor of Technology in Computer Science; GPA: 8.89/10.0* — *Expected Aug 2019*

**Thesis**: Community Detection for Leukemia Cancer Detection  Under guidance of Prof. Susanta Chakraborty

**Relevant Coursework**: Data Structures and Algorithms, Operating Systems, Data Mining, Machine Learning and AI, Probability & Statistics, Discrete Structures, Computer Graphics, Database Management, Computer Networks, Computer Architecture

## Skills

- **Languages**: Python, C++, SQL, Java
- **Technologies**: AWS, GitHub, GitLab, Jekyll, GCP
- **Libraries**: TensorFlow, PyTorch, Keras, Scikit-Learn, Numpy, Pandas, Jupyter, OpenCV

## Experience

**Linux Foundation - OpenDaylight** — Remote , US

*Software Developer Intern* — *Jul 2018 - Nov 2018*

: Designed an automated Jenkins support for building jobs in Maven through bot service for over 75% of Opendaylight projects. Commits

: Implemented a version of mediawiki-rst migration for conversion of mediawiki proposals to other formats. Worked on an automated design for constructing project dependency graph for over 93% versions of OpenDaylight projects.

**FOSSASIA - SUSI.AI** — Singapore

*Software Developer Intern* — *Jun 2018 - Sept 2018*

: Worked in a team of 126 developers to develop prototype for the SUSI Smart Speaker Application along with implementation of APIs for various SUSI skills.

: Implemented speech-to-text and text-to-speech functionality for the Smart Speaker system with improved voice recognition accuracy of 91% measured using standard measures like Word error rate. Commit 1 Commit 2

**SunPy, OpenAstronomy** — Remote, US

*Student Developer* — *Dec 2016 - Apr 2018*

: Collaborated with a team of 60 researchers from NASA GSFC, UCL and Stanford on development of solar image processing algorithms and solar data storage functionality enhancements. - Feature 1 , Feature 2 , Feature 3

: Worked on implementation of solar image processing algorithms - Multi-scale Gaussian Normalisation with 18% improved memory utilization and better feature extraction with less noise. Got acknowledged along with researchers at NASA Goddard Space Flight Center in nine releases for contributions to the project. - Software Releases

## Projects

- **Graph Based Clustering - Document Topic Modelling**: Designed a novel clustering algorithm based on importance factor calculation of nodes in complex networks with improved accuracy compared to traditional graph based methods like markov models. - Publication
- **Solar Data Analysis System**: Implemented a solar data retrieval system to collect solar data from various solar observatories based on date and time and analyze different helio-features from the data over a period of 10 years.
- **Shellix - UnIX Implementation of Shell**: Designed a robust implementation of shell for Unix based systems in C++ with all common features supported under bash with an improved user interface.
- **Chat Systems**: Designed simple chat systems and multi-user chat systems using Computer Networks concepts.
- **Syntalizer**: Designed a simple top down parser for syntax analysis of unambiguous LL grammars in C++.
- **Machine Learning and Desktop Applications**: Worked on implementing a curated list of over twenty simple sub-projects using python, django ranging from games, core machine learning applications and desktop applications. Led a team of 60 open source contributors and mentored them in contributing to the project over 6 months period.

## Publications

- A Novel Graph Based Clustering Approach to Document Topic Modeling  - ICCCNT 2018 IISc Bangalore
- Predicting User Group Activity Using Mobile Sensors - DOI
- Predicting Passenger Survival Rates on the Titanic - DOI

## Achievements

- Recipient of Google India Udacity Scholarship
- Recipient of Microsoft Research India Scholarship - IIT Kharagpur
- Secured a rank within top 0.2% in World CodeSprint Hackerrank
- BOSS 17 - Within 0.08% top open source contributors
- Within top 10% of applicants in All India Engineering Entrance Exam
- Selected for prestigious research internship at Inria, France
- Among top 100 students in International Mathematics Olympiad in state

## Additional Experience

- Mentored over 80 students under Google Code In 2018, Hacktoberfest 2018, 2017
- Led successfully a research team of 25 as a Direct Responsible Individual under the Stanford Scholar Program
- Leading the open source club at Campus as a GitHub Campus Expert - organising hackathons and open source mentorship programs