# NIKHIL MEHTA

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## EDUCATION

**Stony Brook University, Stony Brook, NY | *GPA: 3.78/4.0***
Master of Science, Computer Science ***Expected December 2018***
(Operating Systems, Analysis of Algorithms, Artificial Intelligence, Computational Biology, Data Mining, Discrete Mathematics, Logic in Computer Science)

**PVG's COET, Savitribai Phule Pune University, India**
Bachelor of Engineering, Computer Engineering ***May 2015***

## TECHNICAL SKILLS

- **Programming Skills:** C, PHP, Python, Java, C++, ASM
- **Web Technologies:** HTML, JavaScript, AngularJS, JSP, JQuery, JQuery Mobile, REST, Bootstrap
- **Applications/ Frameworks:** CodeIgniter, Angular, GitHub, Jenkins, Spring, Cordova, Joomla, RabbitMQ, Highcharts

## PROFESSIONAL EXPERIENCE

**Software Developer, GS Lab**, Pune, India ***July 2015-July 2017***

- Conceptualized and developed a healthcare-financial project as a full-stack web-applications developer.
- Part of a team which managed the entire project module, including web development, unit testing, deployment and management of servers (AWS EC2 Ubuntu). The code versioning was maintained using Git.
- Enabled cross-system utilization of the web-application by developing Android and iOS apps for the project. We followed agile methodology during development and testing phases.
- **Technology Stack:** AngularJS in the front-end, PHP-MongoDB in the middleware, and Java-MySQL in the back-end. REST APIs for communication between the front-end and middleware, and middleware and back-end.
- **Accomplishment:** Received two 'Pat on the Back' awards for outstanding contributions in the project.

## ACADEMIC PROJECTS

**Colored Compacted De Bruijn Graph** ***January 2018-Present***

- Working on an Advanced Project under Prof. Rob Patro for reducing the time and space requirements while constructing a colored compacted de Bruijn Graph for the sequenced genomes, using C++.

**SBUnix** ***September 2017-Feb 2018***

- Built an operating system on top of a bootloader. Developed the kernel, user processes, scheduler, context switching and shell in C and Assembly Language under the guidance of Prof. Mike Ferdman.
- Built a read-only file system for the OS which parses the TARFS files to read data and file properties. Tested on QEMU.

**Phenotypic Prediction from Transcriptomic Features** ***October 2017-Dec 2017***

- Developed a predictive model that can approximate the original label from the human population and sequence center data given as output by Salmon (**http://salmon.readthedocs.io**).
- Achieved an accuracy of 71% using Extras Tree Classifier and Random Forest Classifiers from the SkLearn package of Python. Also used the label's equivalence classes to improve the accuracy.

**The Searching Pacman** ***September 2017-Dec 2017***

- Implemented path searching algorithms like BFS, DFS, UCS, A star, Minimax, Expectimax, Bayesian Nets, Backtracking and Forward Checking in Python, which were used by Pacman to reach its goal, overcoming obstacles like ghosts and walls in its path.
- Also implemented Naive Bayes Classification Algorithm to label emails as spam or not spam, with an accuracy of 90%.

**Marathi to English language translator | Undergrad Major Project** ***July 2014-May 2015***

- Conceptualized and developed a machine translation tool, using Java, JSP and HTML, which translates Marathi language sentences to English using NLP's Rule based approach. It uses an online POS tagger maintained by TDIL.
- Created a rearrangement algorithm which generates a semantically correct English sentence from a given Marathi sentence using Word to Word Translation and Rearrangement of the Words.
- Achieved an **accuracy of 89%,** against 65% accuracy of Google Translate for the same corpus tested using BLEU score analysis.
- The project was ranked first at a national level project competition – 'SKN'2015'.
- **Published paper links:** https://goo.gl/UnKo1X, https://goo.gl/jhc7ZR. **GitHub repository:** https://goo.gl/VS3yAb.

## ACTIVITIES

- Stood amongst top 15 in Stony Brook's **ACM-ICPC team selection** competition. ***September 2017***
- **Core committee member of technical-web team** of the college association (ASCI): Successfully led a team of 10 students for conceptualizing and organizing a university level coding competition. ***June 2014-May 2015***
- **Conducted technical workshops on C/C++ programming** for Second and Third Year Engineering students. ***September 2014***