

RAHUL S AGASTHYA

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EDUCATION

ILLINOIS INSTITUTE OF TECHNOLOGY, CHICAGO, IL

MASTERS OF COMPUTER SCIENCE, (EXPECTED), DECEMBER 2019

- Artificial Intelligence
- Machine Learning
- Cloud Computing
- Computer Networks
- Natural Language Processing
- Software Development
- Data Preparation & Analysis
- Software Project Management
- Wireless Networking

STONY BROOK UNIVERSITY, STONY BROOK, NY

BACHELOR OF SCIENCE, COMPUTER SCIENCE, MAY 2018

- Object Oriented Programming
 - Data Structures
 - Analysis of Algorithms
 - Database Management
 - Software Engineering
 - Internet Programming
 - Scripting Languages
 - Social Network Analysis
 - System Architecture
 - Programming Languages
 - Theory of Computation
 - Basics of Data Science
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SKILLS

- **Programming Languages:** Python, Java, C, C++, Ruby, R, Perl, SML and XSB Prolog.
 - **Web Based Languages:** JavaScript, HTML, jQuery, XML and Ajax.
 - **Database Languages and Handling:** MySQL, PostgreSQL, SQLite, MongoDB, Log-stash and Elastic-search.
 - **Frameworks:** Numpy, Scipy, Ply, Flask, BeautifulSoup, Pandas (Python), Rails (Ruby), Spring and JDBC (Java).
 - **Operating Systems:** Unix, Linux, Windows Command Line.
 - **Others:** Git, Object Oriented Programming, Network Programming.
 - **Undergraduate Fellow:** College of ITS, Stony Brook University - May 2015.
 - **The International Award for Young People - Bronze:** Duke of Edinburgh - March 2012.
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PROFESSIONAL EXPERIENCE

INTERN, MCAFEE SOFTWARE INDIA PVT. LTD. – SUMMER 2019

- I had a chance to collaborate with a team working on one of the most advanced, extensible and scalable centralised security management software called as the *ePolicy Orchestrator* (or ePO for short).
- The main function of the ePO is to ensure the conformance of end points (numbers ranging from 11 to 1000) in an enterprise network and report if a system was not compliant.
- In such cases, the software had to be installed or updated manually which was time consuming (as close to 100-150 commands had to be written one by one), and hence I was tasked in developing a script (in this case in *python*) that would fetch the machine information, SSH connect to the machine, send commands necessary (generated dynamically based on the standards prescribed by the OS website) and store the results of the commands sent for future reference, thereby saving effort of the engineers, time of the team and resources of the company.
- The script was compatible with Debian, SUSE and RHEL machines, and was "Developer Friendly" i.e. developed to be scalable to ensure other operating systems could be handled in the future with minor modifications.
- In addition to this, I was also tasked with updating some pre-existing *python* automation scripts that lacked certain functionalities. These scripts were also "modernised" by using the recent file formats and libraries replacing the old ones. One good example was updating the script to handle data in JSON format rather than the old XML format. This not only made future development using the script and data easy, it also made the code efficient.

INTERN, INDIAN INSTITUTE OF SCIENCE, BENGALURU, INDIA – SUMMER 2018

- Worked with the Machine and Language Learning (MALL) Lab of the Institution.
- Assisted in research projects by providing a detailed insight on Query Languages on Graph Databases.
- Functioning of Graph Databases like *Gremlin*, *SPARQL* and *Cypher* was analysed.

TEACHING ASSISTANT, STONY BROOK UNIVERSITY, NY – AUG 2015 - MAY 2018

- Supervised about 25 students of the Introductory *Java Programming* course.
- Helped the students in writing efficient code, and implement the concepts of *Java Programming* and *Object Oriented Programming*.

INTERN, INFINERA INDIA PVT. LTD. – SUMMER 2015

- Developed *Java* application to translate a RAML file containing 100s of schema properties to HTML Tables.
- Implemented the concepts of Object Oriented Programming like Inheritance and Polymorphism, and String, String Builder libraries to develop an efficient application.
- The Project is currently in use by the Documentation Department of the company.

PROJECTS

TRUMPCULENT APPLICATION – APRIL 2016 - MAY 2016

Part of a team of two to develop a *Java* application (using *Twitter4j* and *Tweebo Parser*) which takes a sentence from the user and converts into such a sentence which can be tweeted in a style of a famous celebrity (here President Trump).

BACKPACKERS FLIGHT RESERVATION SYSTEM – AUG 2017 - DEC 2017

Part of a team of four that developed a Web-based application (using *Java*, *JDBC* and *MySQL*) to clone the functionalities of a flight reservation system like *expedia.com*.

ELECTION REDISTRICTING – JAN 2018 - MAY 2018

Part of a team of four to develop a Web-based application (using *Java*, *Spring* and *MySQL*) to redraw election districts of the House of Representatives of the United States Congress, based on criteria including Political Fairness, Population and Compactness.

CHICAGO SOCIAL HUB – JAN 2019 - MAY 2019

Part of a team of two that developed (using *AngularJS*, *Python* and *PostgreSQL*) that helps users to find restaurants (searched by name, cuisine or franchise), sorted based on ratings and reviews, and for a selected restaurant, show the nearest bike docking stations with the status of each station shown.

ELECTRONIC MMP APPLICATION – DEC 2018 - JAN 2019

Mixed Member Proportional Representation is a system of elections, that represent a Legislature in an accurate manner. In this system every voter gets two votes (one for a local representative and another for the political party). An application was developed first using *Java* and also using *Python* to enable such an election electronically, where users will be able to add/delete candidates or parties, voters will be able to cast votes and the results will be generated.

E-CENSUS APPLICATION (TO BE COMPLETED BY THE END OF 2019)

This is an application under development (using *Ruby on Rails*) to provide for an electronic means of gathering information and improve the efficiency of tabulation of data by the Census Board of India.

REFERENCES

Dr. Paul Fodor (Assistant Professor)

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Stony Brook University, Stony Brook, NY.
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