Sanjay Ramachandran

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Education

University of Illinois at Chicago (UIC)   **GPA:** 4/4
Master of Science candidate in Computer Science, Aug 2017 – May 2019 (Expected)
Course highlights: Computer Algorithms, Artificial Intelligence, Information Retrieval, Data Mining, Advanced Machine Learning

SSN College of Engineering, **Anna University**, Chennai, Tamil Nadu, India   **CGPA:** 8.5/10
Bachelor of Engineering in Computer Science and Engineering, Aug 2011 – Apr 2015
Course highlights: Data Structures, Database Management Systems, Software Engineering, Mobile and Web development

Technical Skills

Programming Languages: Java, Python, JavaScript, C++, HTML/CSS
Frameworks/Technologies: Android, REST API, Spring, Jersey, Mybatis, VueJS, Git, JUnit
Databases: Oracle, Cassandra

Work Experience

Expedia Group, Springfield, Missouri   *May 2018 – August 2018*
Software Development Intern

- Developed a debugger to view API call journey details and identify discrepancies in micro-services, if any, in minutes. Used **Java, Jersey framework, VueJS, AWS, JUnit** and **CI/CD tools**.
- Developed an easy-to-use, lightweight, extensible logging library for developers to use in their micro-services to log HTTP messages with JSON, XML or protobuf payloads and upload it to AWS S3

Fidelity Investments, Chennai, India   *August 2015 – June 2017*
Associate Software Engineer

- Developed APIs and database packages to provide real-time data access using **Java, JSON, Spring, MyBatis** and **PL/SQL**
- Directly collaborated with the clients and addressed feature requests and platform issues
- Achieved more than **25% reduction** in response time by migrating a key capability from **Oracle + SOAP** to a **Cassandra + REST** based architecture
- Developed dashboards using **HTML/CSS, Bootstrap, JSON, AJAX, jQuery, AngularJS, SpringMVC** and **OracleDB** to monitor platform performance and generate usage reports
- Developed an automation framework with UI to reduce batch job development and deployment time from **8 days to a few minutes**. Received "**You've Earned It**" award for the same

AhaPunch, Chennai, India   *May 2015 – July 2015*
Android Developer

- Developed and launched the first version of an Android application with features to create profiles, socialize, upload and share media contents to our platform and on other social platforms
- Devised strategies to market our initial launch

Projects

Information Retrieval | Python

- Developed a Search Engine called **Noogle** using a Vector based retrieval model for the UIC domain. Includes a **UI, crawler, preprocessor, indexer** and intelligent components like **PageRank**, Query Expansion

Text Mining | Python

- Implemented a version of the **Multiple Minimum Support PrefixSpan** algorithm to mine Sequential Patterns from a transactional database
- Developed and analyzed multiple statistical and deep learning models to perform **Aspect based Sentiment Analysis** on a set of technology and restaurant reviews. Achieved **74%** accuracy(approx.) with SVM + feature engineering

Artificial Intelligence | Python, Java

- Developed a 15-Puzzle solver that outputs the moves to reach the final solution using **BFS, IDS**, **AStar** search algorithms and compared their performances
- Implemented a python version of ID3 Decision tree learning algorithm with a classifier along with Chi-Squared pruning to avoid over fitting
- Developed intelligent agents for a Wumpus world simulator using Simple Reflex, Model based and Goal/Utility based architectures that competed with my peers' agents to score the highest

Online Report Generation and Summarization using Information Extraction | Python, PhantomJS

- Multi-document Extraction from webpages using clustering and classification algorithms on data crawled by scripts and Multi-document Summarization using text processing algorithms and report generation using user defined templates
- Achieved **0.9 precision score** when compared to other open source tools

Mobile ATM app | Android, PHP, MySql

- Developed an Android app that helps avoid the use of ATM cards and sharing of credentials by generating hash codes to be used as proxy for a transaction as part of Object Oriented Design coursework