Personal homepage

PRAFULL GAIKWAD

Contact - (480) 616-6248 **Email**:ppgaikwa@asu.edu **Linkedin**: https://www.linkedin.com/pub/prafull-gaikwad/6b/743/6

TECHNICAL SKILLS:

Programming expertise: Data structures, Algorithms, Object oriented programming, Concurrent multitask programming, Linux Kernel Development, Design Patterns.
Prog. Languages: - Python, Java, Nodejs, Javascript, C, C++, D3.js, Angular, Bash scripting, SQL, MongoDB, jQuery, Bootstrap.
Technology and S/W Framework:– Spring**,** Django, MEAN stack, Android application development, TCP/IP, Android Software Stack, Natural language processing, Statistical machine learning, pandas/numpy/scikit, Modbus, Celery-RabbitMQ.

ACADEMIC PROJECTS:

1. **MeetME *(Java)*** – Developed an end-to-end web application in a team of two which checks the limitations of popular meeting scheduler applications like doodle following **AGILE** methodologies on **SPRING MVC framework**. I contributed majorly towards backend implementing **OAuth2** and **Social media login** and some part of client side was done in **HTML, jQuery, Bootstrap**.
2. **User Preference based recommendation of Yelp restaurants (Python) –** Built a recommendation system model based on Yelp Dataset by predicting rating of restaurants to recommend them. The rating prediction model gives an average accuracy of **49% with Logistic Regression & Gaussian Bayes Classifier** and **0.305 Mean squared error with Linear and Support Vector Reg.**
3. **Visual Recommender for Stack Overflow –** Developed an end-to-end application based on **MEAN stack** interacting with a Python module for **NLP tasks** through **ZeroMQ**. **Implemented the entire NLP Python** module along with ZeroMQ infrastructure. Contributed at front-end to implement a **graph network** which showed all the related keywords to a given input string.
4. **Movie Management Android application*(Java)* –** Developed a **Movie Manager Application** capable of communication with a standalone **Java server via Json RPC** and communication with the **Open Movie Database REST API** to fetch movie details and **(add, delete, reset, modify)** display them in an expandable list View based on its Genre. **SQLite DB** is used here.
5. **Compiler for self-designed Language *GPS (Java)* –** Designed and developed a language which can interpret programs and recursion. Implemented the **Grammar, Lexer, Parser and Intermediate Code-Generator with ANTLR4 in Java** and **designed the Run time environment to take intermediate-code** as input and output its corresponding result.

PROFESSIONAL EXPERIENCE:

1. Software Development Engineer, Intern **Dell EMC Corporation (May 2016-Aug 2016)**

Developed a Parser and Translator in Python to convert TestMgr Lists to Python unit test cases.***(Python, OOPs, DesignPatterns)***

- **Optimized** lists conversion to Python test cases **to save around 95% of time** incurred in manual conversion of lists.
- **Analyzed and developed Parsing Expression Grammar** for **proprietary** scripting language syntax used in TestMgr framework.
- **Designed the translator** and **developed Code-Generation Semantics** to convert list's constructs to Python Compliant Helix framework source code adhering to the Python Unit Test framework.

2. Research Developer **I3DEA laboratory, ASU (Jan 2016 – Present)**

Monitor and Manage inverters(IoT) – Working on a Verizon funded project to develop a data warehousing system for management and monitoring of Solar inverters remotely. (***Python, Django, Celery Multitasking, Modbus, RS485, D3, Leaflet)***

- Developed a multitasking environment in **Python Celery (RabbitMQ) on Raspberry Pi** implementing **TCP/IP** and **RS485 based Modbus SMA** protocol to communicate with Inverters.
- Implemented a Modbus protocol interface in C language to interact with inverters on Raspberry pi. It is integrated in the Python Celery framework so that the data collected from C interface is warehoused on AWS server.

3. Software Engineer **Samsung Research Institute- Noida, India (June 2012-July 2015)**

- Recognized as "**Employee of the year 2013-14**" for best contribution in the Samsung Core 2 Duos Project **(C, C++)**.
- Worked as a Software engineer on Power optimization of Android Smartphones and porting device drivers**.**
- Developed and designed Sec-battery driver and framework throughout the Android Stack.

4. Graduate Teaching assistant – Operating systems & Networks **(Spring 2016,Fall2016)**

Design and grade students assignments, quizzes, midterms and finals. Manage course content and student queries.

EDUCATION:

Master of Science in Software Engineering - *Arizona State University, Tempe, AZ* ***(GPA 3.96/4.00)*** ***May 2017***
Bachelor of Technology – *National Institute of Technology, Nagpur, India* ***(3.3 GPA)*** ***May 2012***