Sarthak Khanna

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Computer engineer having strong analytical and communication skills; self-motivated and a team player. Seeking full time software developer opportunities starting May 2018. Eligible to work in the US through post-OPT.

EDUCATION

» **Master of Science in Computer Engineering (Computer Systems)**, Expected May 2018 GPA: 3.54/4.0
Arizona State University, Tempe, Arizona, USA

» **Bachelor of Technology in Electronics and Communications Engineering,** May 2016 GPA: 8.75/10
Vellore Institute of Technology, Vellore, Tamil Nadu, India

SKILLS

» **Tools**
Git • MySQL • phpMyAdmin
Linux • Unreal Engine 4
Android Studio

» **Languages**
Python • HTML/CSS • SQL
Matlab • Java • C

» **Frameworks/Libraries**
Flask • jQuery • Bootstrap • Jekyll
Scikit-Learn • pandas • numpy
matplotlib • seaborn • GraphView

RELEVANT COURSEWORK

» Artificial Intelligence
» Statistical Machine Learning
» Data Mining
» Mobile Computing
» Database Management
» Software Security
» Foundations of Algorithms
» Communication Networks
» Data Structures and Algorithms

WORK EXPERIENCE

» **Technical Developer at Stealth Gaming, India** (2014 -2016)
- Developed the website and implemented a web based cafe management system.
- Maintained the technical infrastructure on a daily basis.

PROJECTS

» **BraiNet: App Unlock phone using EEG signals,** 2017 (Mobile Computing)
- Setup linux cloud and fog servers on a Digital Ocean droplet.
- Implemented a SVM learning algorithm to train and compare the users EEG data in **python** using **scikit-learn** .
- Created an offloading algorithm to determine which server to choose for authentication.

» **Pacman AI Challenges,** 2017 (Artificial Intelligence)
- Implemented search algorithms (A star, UCS, DFS, BFS) and incorporated them in Pacman using python.
- Programmed Expectimax, Minimax , Alpha Beta pruning, Value Iteration, Q - Learning and policies.
- Created an AI agent to optimally play Pacman in various scenarios.

» **Theatre Management system,** 2017 (Database Management)
- A management system built using **Flask** on python. Setup up SQL database and performed various tasks like insertion, updates, deletes along with using indexes and triggers in the database.
- Used **flask-mysqldb** to connect to the SQL database. Also used the python **Faker** library to generate dummy data to fill the database.
- Implemented the web based management system using HTML, CSS and Bootstrap.

» **Android App to Detect User Activity,** 2017 (Mobile Computing)
- Detects whether the user walked, ran or jumped using machine learning. Used Android Studio to create the app.
- Created an SVM classifier to predict user activies using acceleromter data.

» **Ubuntu Daily Wallpaper changer,** 2017
- A python script that sets the background of the desktop as the Bing picture of the day, updated everyday.
- Uses python **urllib** and **os** functionalities to download and save the images. Tried on Ubuntu 16.04.

» **Airbnb New User Bookings Prediction,** 2016 (Statistical Machine Learning)
- Processed raw data, making it usable for further analysis using the python **pandas** library.
- Performed feature engineering and statistical analysis of the data obtaining relevant insights using **scikit-learn**
- Implemented traditional classifiers (KNN, SVM, Logistic Regression) and observed their accuracy.
- Created a blended ensemble and analyzed it's performance versus traditional classifiers.

» **Stuttered Speech Recognition,** 2016
- Modified an existing algorithm to facilitate speech recognition for people suffering from stuttering
- Performed audio processing and stutter removal in Matlab.
- Designed a neural network to learn from training samples to remove stutter from new test inputs in python, this new audio was then passed to the Google speech API to be recognized without the stutter.

» **Digit recognition using Matlab,** 2015
- Created a backward propagation neural network to recognize hand written digits using Matlab.