Angad Singh

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I am an aspiring software developer with 2 years of experience hoping to find a career in areas such as back-end development or machine learning. I have a passion for writing efficient and clear code and always strive to exceed expectations.

Technical Skills

Languages:	Python (Strong), Javascript (Proficient), C/C++ (Proficient), SQL (Proficient), Shell (Proficient), C# (Proficient), Java (Prior Experience), MATLAB (Prior Experience)
Frameworks/ APIs:	Numpy (Strong), React (Proficient), Node.js (Proficient), Bootstrap (Proficient), Pytorch (Prior Experience), Blender (Prior Experience)
Technologies:	Linux, Microsoft Server, Hadoop, Heroku, Apache NiFi

Work Experience

Technical Application Analyst | Tata Consulting Services **Feb 2019 – Current**

- Develop queries to give accurate reports of potential fraudulent transactions or missing transactions to assist with the development of the application.
- Develop scripts in order to help automate daily tasks. This includes execution of SQL queries and the automatic creation of spread sheets detailing issues in the system.
- Collaborate with other teams to organize major upgrades in order to improve the system performance without causing a major downtime to the system.
- Support production environment and resolved any failures or memory issues to ensure that the application was preforming as expected.
- Technologies: Python, Bash, PowerShell, SQL, Hadoop, DB2, Apache NiFi

Project Engineer | Evertz Microsystems **May 2018 – Jan 2019**

- Automated the pre-possessing and transcoding of assets so that our customers were able to distribute videos to their respective clients.
- Developed the primary scripts for NBCU's non-linear delivery of assets to media service providers to transfer assets to various locations using different transfer methods, such as Signiant and Faspex.
- Refactored SQL queries and reduced run time of existing queries by 50%, in order to improve migration to a new DBMS (MariaDB).
- Utilized the Atlassian suite of tools (JIRA, Confluence) to maintain clear lines of communication with team members and project stakeholders, while operating using the SCRUM framework
- Technologies: JavaScript, Python, SQL, DB2, MariaDB, Git

Projects

MLB Analytics | JavaScript, Bootstrap, React, Node JS **Aug 2019 – Sept 2019**

https://github.com/singha95/mlb_analytics

- Utilized the MLB Stats API to create an interactive web app that will display stats and rosters for the different MLB teams.
- Deployed the web app using Heroku. (https://mlb-player-analytics.herokuapp.com/)
- Implemented support for mobile devices to ensure that the app is compatible with multiple devices.
- Preformed user testing to receive feedback to help make the UI more engaging and easier to use.

Hearthstone Card Viewer | Django, Python, HTML, Bootstrap, SQL **Sept 2019 – Nov 2019**
https://github.com/singha95/HearthstoneCardViewer

- Utilizing the Blizzard Hearthstone API in order to create a web app for players to create and search for new cards.
- Using the oauth2 protocol data about current cards in the game is pulled directly from Blizzards servers.
- Utilizing SQLite so that users can search quickly search for cards based on type, mana cost and name.
- Developing a feature to allow user to create their own build with the app and save a local copy so that they can edit or modify it later.

Creative Flow+ Dataset | MATLAB, Python, Bash **Sept 2017 – Jan 2018**
http://openaccess.thecvf.com/content_CVPR_2019/papers/Shugrina_Creative_Flow_Dataset_CVPR_2019_paper.pdf

- Developed an optical flow dataset like the MPI Sintel Dataset using the Blender Python API.
- Users would be able to create their own datasets with different stylized effects. This data set can then be used with existing optical flow algorithms as training data or to test how well the algorithm generalizes.
- Developed scripts in bash that would help users automate the process of rendering batches of Blender objects.
- Developed scripts using the Blender API to randomize the camera placement in the scene in order to increase the size of the dataset.
- The project was published as a part of the 2019 IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) under the title of Creative Flow+ Dataset.

Riff Warrior | C#, Unity **Sept 2017 – Feb 2018**
https://github.com/singha95/RiffWarrior

- Cooperated with a diverse team of programmers, artists and musicians to create a third person action adventure game in the Unity game engine.
- Players would explore a maze to search for an exit. At the end there would be a final boss for players to defeat, which would be similar to a rock band song.
- Improved notes sync with music and improved accuracy of input detection so that the battle system was more responsive and matched the music that was playing.
- Created a tutorial for players to get accustomed to the game controls and to introduce players to the rhythm-based battle mechanics.
- Performed user testing with other students to find game bugs and to receive feedback in order to improve gameplay and to find bugs in the game.
- Utilized the rock band controller for player movement and the battle system. The game was showcased at the Level-Up 2018, student games showcase, at the Design Exchange in Toronto

Education

Honors Bachelor of Science Specialist in Computer Science **Sept 2014 – May 2018**
University of Toronto
Focus in Artificial Intelligence