BHAGPREET BRAR

bb86029@gmail.com 951-436-6982 Bhagpreet

EDUCATION

University of California, Riverside Sept. 2017 - Dec. 2020
Bachelor of Science Computer Science 2020
GPA: 3.76
Major GPA: 3.81

EMPLOYMENT

Tata Consultancy Services, *Software Engineer*, Remote Apr. 2021 - Current
• Completed certification training in technical skills such as Java, Angular, Node.js, typescript, and more.
• Awaiting project placement for customer software development.

Tutor.com, *C++ Tutor*, Remote Jan. 2021 - Current
• Teaching students C++ programming language, from basic syntax to OOP and data structures and algorithms. Student grade levels range from elementary school to undergraduate college students.
• Encouraging student progression and growth, confirming their understandings through feedback and questions, and providing positive affirmation.

Amazon, *Software Development Engineer Intern*, Remote June 2020 - Sept. 2020
• Researched and worked on a prototype for a semi-automated system to replace a manual process, reducing months of manual work to an hours worth of work with the model. Worked with applied scientist to understand the manual process and ML model for the semi-automation.
• Used Amazon CLI and internal tools to build a pipeline, as well as AWS Batch, Lambda, EMR, Step Functions, S3, and more in research and development of the software.
• Attended daily stand-up meetings and weekly/bi-weekly meetings with mentor and manager.

SKILLS

C++, Linux, Git, Googletest, Bash, C#, Unity Engine, HTML, CSS, Python, Pandas, Spark, SQL

PROJECTS

Machine Learning Models (Python) June 2019
• Implemented multiple ML models from scratch using the iris.data data set.
• Used multiple libraries, including pandas, numpy, seaborn, scikit-learn, and matplotlib.
• Visualized iris dataset using different graphs and plots to perceive the best features and their reliability to classify iris flower species.
• Built models such as a linear regression model by implementing gradient descent , a K-NN Classifier model, and measured performances using multiple K neighbors.
• Implemented the K-Means Clustering method and also measured the performance of multiple K clusters.

VR Escape Room (Unity/C#) Mar. 2019
• Created an escape room using the Unity Engine and utilized the Oculus virtual reality player controller since the game is intended to be played using the Oculus Rift's headset and hand controllers. The game uses C# scripts for more interactions with the user, and multiple puzzles are found within the virtual world where the user must solve each one in order to win and "escape".
• The game uses the Oculus Avatar SDK to support grabbing with the OVR player controller to simulate grabbing when using the VR equipment when playing the game. Some free assets were also used to make the game look and feel nicer, as well as being used for some of the puzzles such as a chess board asset that was used in the game.

RShell (C++) Dec. 2018
• Created a command shell using fork, execvp, and waitpid, and has the functionality of precedence using parenthesis.
• The shell could also accommodate for boolean connectors such as &&, ||, which would run certain commands based on the outcome of the command’s execution. This can also work with precedence of the parenthesis when typing commands in the shell.
• The shell can handle some input and output redirection as well as piping. Some cases still have some bugs.
• The shell can also use the test command with files or directories to see if they exist or not, and return true or false based on the outcome. It can also check if the input given is a file or a directory, and also returns true or false depending on the outcome or if it even exists or not.

Review Rater (C++) Nov. 2018
• User enters a review for a movie, where an algorithm auto scales the review from 1-5, 1 being the worst and 5 the best, based on reading data of various movie reviews and associate keywords with certain ratings to auto-scale the user entered review. Similar to a machine learning algorithm.

ACTIVITIES

Cutie Hack 2017
• UCR ACM hosted Hackathon