Brian Oh

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Technical Skills

Languages Java, C/C++, Python, Javascript, HTML & CSS, Apex, Visualforce, Bash

Frameworks & Tools Salesforce, jQuery, Bootstrap, Eclipse, Git, SQL, R, MATLAB, Unix

Experience

POS Portal — *Sacramento, CA*

Software Developer Intern — *May 2016 - Current*

- Executed full lifecycle software development including gathering design specifications and requirements from clients, developing Apex classes/triggers and Visualforce pages, and testing implementations before pushing to production.
- Helped integrate POS Portal's Salesforce application with Heroku, a cloud PaaS infrastructure, to allow Salesforce incompatible tasks to be deployed into a scalable environment.
- Authored 5+ Apex classes/triggers and 5+ Visualforce pages.

Projects

BasicDB — *C++*

A functional and robust relational database engine — *2016*

- Implemented a parser class that tokenizes user input and verifies whether the input is a valid SQL query. Valid queries are then transformed into expression trees and evaluated.
- Implemented classes that handle creating tables, inserting records, and projecting records by interpreting expression trees.
- Implemented a B-Tree index class that creates a B-Tree and an index file for all keys and primary keys for fast record access.
- Implemented Nested Loop Join, Hash Join, and Index Join. The program chooses the most optimal join by evaluating the statistics kept in the table and index files.

Gender Recognition Artificial Neural Network — *Java*

An ANN that learns to recognize a person's gender in a photo — *2016*

- Implemented a multi-layered feed-forward network by implementing sigmoid node, hidden layer, and output layer classes.
- Implemented a parser class that converts a .PNG file into a text file containing the corresponding grayscale pixel values to be used as a vector of input nodes. The input nodes are then fed forward along connecting pathways to the output node to determine whether the picture was male or female.
- Implemented a backpropagation algorithm to calculate the gradient of error regarding the network's modifiable weights.

Connect 4 AI — *Java*

AI that uses the minimax and alpha-beta pruning algorithms to play Connect 4 — *2016*

- Implemented minimax and alpha-beta pruning methods using recursion and a custom evaluation method.
- Implemented an evaluation method that determines the value of a given state by assigning appropriate weights to the amount of three-in-a-row's and two-in-a-row's for both players.

Education

University of California, Davis — *Sept. 2011 - Current*

Bachelor of Science in Computer Science — *Expected Graduation: Dec. 2016*

- Community Service Award (2014)
- Dean's Honor Roll

Certifications

NREMT EMT-B Current