

# Sandip Samantaray

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## Summary of Qualifications:

- Proficient in C, C++, Java, JavaScript (es3, es5 and es6). Familiar with C#, PHP, Python and Bash scripting.
- Well-versed in testing and debugging, stack tracing and socket programming.
- Experienced in SQL, SQLite, SQL server and SQL Azure JDBC.
- Self-directed and motivated programmer who works effectively in a dynamic environment.
- Proven problem solver with strong communication skills.
- Multi-lingual: Hindi (fluent in conversation, reading and writing), Japanese (basic writing and conversation).

## Education:

University of Washington (Seattle, WA), GPA: 3.5

June 2018 (expected)

Bachelor of Science degree in Computer Science and Mathematics

Coursework completed: Systems Programming (333), Software Design and Implementation (331), Hardware and Software Interface (351) and Foundations of Computing I & II (311/312), Intro Programming (142/143), Web Programming (154), Data Structures and Parallelism (332).

Coursework in-progress: Algorithms (421), Data Management (344).

## Projects:

### **Oracle, (JavaScript, Python)**

November 2016

- Developed a chat bot that analyzes the stock market and makes predictions based on the sentiment data collected. IBM Watson cloud services was used for sentimental and natural language analysis and stock data was collected from Alchemy data news.
- Implemented front-end of the bot app using AngularJS and Node.
- Created endpoint on the server-side to analyze user input with Watson Natural Language API and retrieve sentiment data for the client.

### **VRifyData, (C#, Unity)**

November 2016

- Analyzes currency exchange rates throughout the world. The rates are dynamically updated with user's preference.
- Worked on the 3D model of the world. Created scripts to parse live data into the world based on events and user preferences.

### **Chess Engine, (Java)**

December 2016

- Developed a chess engine on Java, to run on an already implemented chess server.
- Implemented Alpha-Beta pruner that searched the tree for the best move using parallel threads.
- Designed an efficient transposition table to keep track of the searched paths in the tree and to improve searching efficiency for higher depths.
- Tested the engine against an already implemented bot on the server.

### **333 Web search engine, (C, C++)**

June 2016 - August 2016

- Developed a search engine with C++ to search for queries using a local database.
- Implemented a file crawler and indexer to parse data and create an inverted index structure.
- Used multiple threads on a socket to handle interactions with more than one client at a time.

### **CampusMap Navigator, (Java Swing)**

January 2016 - March 2016

- Developed a Java swing app using MVC architecture to navigate between UW campus buildings.
- Implemented Dijkstra's algorithm to find shortest path between two buildings.
- Created Junit test cases for the implementation of the graph ADT.

## Extracurricular Activities:

- Took part in ProjectEuler+, OpenBracket CodeSprint and Week of Code 24 (Bronze) contest on Hackerrank.
- Explore new technologies. Learnt creating simple environment and modifying game object properties using scripts on Unity for the Oculus Rift.
- Hackathons: DubHacks 2016, CalHacks 3.0, WildHacks 2016