Adam Ali

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Education

Bachelor of Computer Science & Software Engineering **GPA 3.7**
University of Washington Bothell *Expected graduation in Dec. '18*

Highlighted Coursework

- **Computer Networking** *Spring '18*
  TCP/UDP, servers, routing, traffic flow management, web APIs, security/performance.
- **Database Systems** *Spring '18*
  Hierarchical, relational and network DB designs. Structured Query Language, data modeling.
- **Hardware & Computer Organization** *Winter '18*
  Digital logic, memory design, state machines, microprocessor models, instruction set design.
- **Operating Systems** *Fall '17*
  System architecture, memory management, process scheduling, resource allocation.
- **Software Analysis & Design** *Fall '17*
  Team project based. Requirements, diagrams, prototyping, risk analysis, code review/test plans, the software life cycle and documentation.
- **Data Structures & Algorithms I/II** *Winter/Spring '17*
  Algorithm analysis with mathematical reasoning. Binary, hexadecimal, trees, lists, arrays, heap/merge/quick sort and binary search.

Key Skills

- Java, C++, C#, Assembly, HTML/CSS
- Technical writing
- Agile, Scrum
- Windows, Linux CLI
- Scripting in Python, Bash
- Version control, UML
- Problem-solving
- Adapt and learn quickly

Relevant Projects

68K Disassembler – *Hardware & Computer Organization* **Mar. '18**
Translates machine code into human-readable 68K source.

ThreadOS File System – *Operating Systems* **Dec. '17**
Implements a UNIX file system, including unit tests for many read/write types.

ThreadOS Cache – *Operating Systems* **Nov. '17**
Implements data block caching and page replacement to improve disk performance.

ThreadOS Scheduler – *Operating Systems* **Nov. '17**
Implements the round robin algorithm to schedule thread tasks for a virtual operating system.

Media Inventory System – *Data Structures & Algorithms II* **May '17**
Applies object-oriented design to manage and search for inventory using multiple databases.

Dijkstra's Shortest Path – *Data Structures & Algorithms II* **May '17**
Calculates the shortest path from any source to any destination on a coordinate map system.

Image Segmentation – *Data Structures & Algorithms I* **Mar. '17**
Implements an algorithm to partition images by scanning pixels and grouping by color.

Additional Experience

Math and Science Tutor **Jan. '18 - Present**
Academic Link Outreach (non-profit) *Kirkland, WA*
Support young students with proven test-taking strategies to prepare them for exams.

Programming Tutor **Feb. '14 - Present**
Self Employed *Bothell, WA*
Engage high school students with exciting ways to solve problems and develop their skills.

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