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ARMAAN SOOD

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EDUCATION

Seattle, WA	University of Washington	Fall 2016 – Spring 2020

3.92 GPA (Phi Beta Kappa, Dean's List)
- B.S. in Computer Science (direct admission) and Mathematics (double major)
- **Current Courses**: Computer Vision; Algorithms; Complex Analysis
- **Past Coursework**: Database Systems (grad); Theory of Computation; Systems Programming; Compiler Construction; Real Analysis; Inferential Statistics; Data Structures + Parallelism; Software Design and Implementation; Programming Languages; Hardware/Software Interface; Data Management

EXPERIENCE

Data Scientist Intern	Microsoft	June 2018 – September 2018

- Implemented a real-time statistical process control system for Microsoft devices, processing 200 gigabytes of data per day, with Azure and .NET tools.
- Will be used to improve quality, avoid excess costs, and find root causes during quality failures significantly faster.

Chair	Association for Computing Machinery	September 2016 – Present

- Elected to be the external face of ACM and represent CSE students.
- Coordinating with CSE, Student Advisory Council, ACM-W, and industry affiliates.

Teaching Assistant	University of Washington	March 2017 – August 2017

- Head Grader for Software Design and Implementation (CSE 331).
- Taught a section of 20-25 students and answered content-related questions on forums.
- Graded theory-based code reasoning and project-based assignments.
- Held office hours for homework help and course questions.

Allen School Ambassador	Paul G. Allen School of CSE	Fall 2016 – Present

- Represented Allen School in K-12 outreach and recruitment efforts.
- Designed a MySQL/NodeJS database for computer science education in the Seattle area.
- Coordinated and managed activities and volunteers for outreach events such as Engineering Discovery Days, Computing Open House, Admitted Student Previews, and Weekly Info Sessions, and tours.

High-School Intern	Concur	Fall 2014

- Developed a GIS-based app using Android Studio as a team using Java to present to Concur executives.

PROJECTS

- **Java to x86-64 Compiler** (June 2018): Uses JFlex (lexical analyzer generator) and CUP (LALR parser generator) to generate a scanner and parser using context-free grammars, then transforms the program into an AST for static semantics checking, type checking, and symbol table generation via the visitor pattern. Finally, generates x86-64 code based on the AST which can be run.

- **SimpleDB** (March 2018): A relational database management system in Java that handles queries (joins, aggregate functions, selections, etc.), ACID transactions, and a steal/no-force crash recovery (with a write-ahead redo/undo log + non-quiescent checkpoints). It can run in parallel or as a distributed system across multiple machines.

- **Spam Filter** (October 2017): A Naïve Bayes Classifier in Python trained on a subset of the Enron Corpus as pre-labeled data and predicts the spam classification of unseen emails.

- **CalcuSpeak** (DubHacks 2017): A mathematics tool for the visually impaired with Python, JavaScript, Bing Speech API, Wolfram Alpha Full Results API, and Google Cloud Speech API.

RESEARCH EXPERIENCE

Undergraduate Assistant	UW Database Group	Spring 2018 – Present

- Developing a cost model for LightDB, a database system for virtual and augmented reality content at scale.

Undergraduate Assistant	Taskar Center for Accessible Technology	Autumn 2016 – Winter 2017

- Worked with Dr. Anat Caspi and Nick Bolton to Developed a tutorial module for the OpenSidewalks Project in Unity.

LANGUAGES AND TECHNOLOGIES

Advanced	Intermediate	Familiar
Java; SQL	C; C#; R; Python	C++; JavaScript; x86-64