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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 Networks; 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**

- Implementing a distributed statistical process control system using .NET and Azure that detects parametric drift

Chair **Association for Computing Machinery** **September 2016 – Present**

- Planning CSE events, such as interview prep, orientation, Fall Fest, Winter Ball, Spring BBQ
- Coordinating and advertising industrial affiliate sponsored events such as recruiting dinners and office hours

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
- First place in Concur's app development challenge

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 on a single machine or as a distributed system across multiple physical machines using Apache Mina (a Java NIO wrapper).

- **Spam Filter** (October 2017): A Naïve Bayes Classifier with Python that trains using a subset of the Enron Corpus as pre-labeled data and predicts the 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; LaTeX	C; C++; C#; R; Python; Git; Linux	JavaScript; x86-64