Altan Haan

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EDUCATION

UNIVERSITY OF WASHINGTON, Seattle, WA.

BS. in Computer Science and Mathematics (In Progress), Sep. 2016 – present

- Completed the first-year honors math sequence with a 3.9/4.0 average, 3.73 for second-year.
- Cumulative GPA: 3.85 overall, 3.88 in major (Computer Science).
- Annual Dean's List: 2016-17, 2017-18.
- Expected graduation: June 2020.
- *Relevant Coursework*: Data Structures & Parallelism, Hardware/Software Interface, Software Design & Implementation, Systems Programming, Logic & Proofs, Combinatorics & Probability.

UW EARLY ENTRANCE PROGRAM, Seattle, WA.

Accelerated admission into UW Seattle, Jun. 2016

RELEVANT SKILLS

- Self-driven learner and worker, fast at finding and learning relevant languages and APIs for various tasks.
- Proficient in C, C++, Java; strong understanding of OOP principles and explicit memory management.
- Experience in systems-level programming, program optimization, low-level/high-performance computing.
- Proficient with Git, programming project management, Linux development environments.
- Experience in graphics programming with OpenGL, web development.
- Solid background in pure and applied mathematics, strong logical reasoning skills.
- Bilingual in English and Mandarin Chinese (proficiency in reading, listening, speaking).

PROFESSIONAL EXPERIENCE

UW PLSE, Seattle, WA.

Undergraduate Researcher, May 2018 – present.

- Working with James Bornholt in the PLSE group on program synthesis and verification, using symbolic programming in Rosette. Implemented abstract algorithms for oracle-guided and conflict-driven clause learning (CDCL) program synthesis tasks.

PERSONAL PROJECTS

Available on GitHub at https://github.com/altanh

RISC-V Emulator and Assembler, Oct. 2018 – present

- Developing an emulator for the RISC-V open ISA in C, with intended support for the complete RV64G instruction set. Additionally, developing an assembler in C++ targeting the same architecture.

Multiple-Precision Fractal Generator, Dec. 2017

- Created a multithreaded portable application for generating and rendering fractal data, with support for arbitrary floating-point precision and image output.