

# MIKE HE

<https://ad1024.space>

[dh63@cs.washington.edu](mailto:dh63@cs.washington.edu)

(206) · 887 · 8588

## EDUCATION

---

### University of Washington, Seattle

*B.S. in Computer Science*

*Sept. 2018—Est. Jun. 2022*

- Cumulative GPA: 3.87
- Interests of Studies: Programming Languages & Formal Verification

#### Selected Courses:

- **CSE 332** Data Structures & Parallelism
- **CSE 402** Domain-Specific Languages
- **CSE 490** Programming Languages & Program Verification
- **CSE 507** Computer-Aided Reasoning for Software
- **CSE 505** Principle of Programming Languages

## SKILLS

---

<b>Languages</b>	Python, Java, Haskell, Agda, OCaml, L <sup>A</sup> T <sub>E</sub> X
<b>Skills</b>	Certified Programming, Functional Programming, Automated Verification
<b>What's more?</b>	I've been playing the violin for 16 years. I like Symphonies composed by Gustav Mahler.

## EXPERIENCE

---

### PLSE

*Research Assistant*

Oct. 2019—Now

*Seattle, WA*

- Working on Project Marlowe, synthesizing compilers for domain-specific hardware. (Summer Research Intern).
- Worked on tv<sub>m</sub>/relay, a High-Level Intermediate Representation for tv<sub>m</sub>.
- Worked on Dynamic Tensor Rematerialization, an online greedy gradient checkpointing algorithm.

### UWECE

*Research Assistant*

Jan. 2019—Sept. 2019

*Seattle, WA*

- Developed an online panel for visualizing data collected from solar panels deployed around UW campus; Deployed the system to the CEI Testbeds, tested for its stability and optimized its performance.

## PROJECTS

---

### Sager

*On Github*

A Demonic Graph Synthesizer (data structure synthesizer) that aims for worst-case performance of graph-related algorithms (e.g. SSSP). It uses ROSETTE as the solver for synthesizing the core structure and calls a scaler for generating larger graphs. It is the final project of CSE 507 (Computer-Aided Reasoning for Software).

### veripy

*On Github*

An auto-active verification library for Python3 based on verification condition generation of Hoare Logic.

## HONORS

---

- **Lynn Conway Research Award (DTR Team)**, ADA *2020*
- **JASSO Scholarship**, Waseda University *Jun. 2019*
- **Annual Dean's List**, University of Washington *2018—2020*
- **First Prize**, Software Engineering Hackathon for High School Students (Beijing) *Apr. 2017*
- **Second Prize**, National Olympiad in Informatics (Beijing Regional) *Dec. 2016*