Isaiah Robert Grace

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Education

Purdue University, West Lafayette IN	**GPA: 3.36**
Bachelor of Science in Computer Engineering, Minor in History	Aug 2015 – Dec 2019

Technical Skills

Proficient			**Familiar**	**Relevant Coursework**
C/C++	Java	ARM Assembly	Scheme	Data Structures & Algorithms
Python	Bash	SystemVerilog	RapidXML	ASIC Design Lab
LaTeX	Matlab	Regular Expressions	OpenMP	Microcontrollers
Git		Microsoft Office	Cadence software	Object Oriented Programming

Research and Project Experience

Polymorphic Logic integration, senior design project   Feb 2019 – Present

   Investigating novel transistor designs for digital logic synthesis. Creating full custom logic elements to be integrated in a System on Chip fabrication run.

3rd place in Spark challenge: Tetris hand-held console   Mar – May 2019

   Led a team of four in developing a STM32-based handheld Tetris console. Created an SPI driver for an LED display using C++ and assembly.

USB to AHB ASIC Module Design   Nov 2018

   Collaborated to design and test a USB interface module suitable for use on a SoC.
   Personally designed and wrote SystemVerilog code for the USB receiving and decoding module.

Zork Text Adventure   Oct 2018

   Partnered with another student to create a C++ version of the 1977 Zork text adventure game.

1st place in Data Structures Big Data Challenge   Oct 2017

   Optimized Huffman coding of arbitrarily large data input with multi-threading.
   Applied principals of data structures and algorithms to heavily optimize C code.
   Placed first in class-wide competition to compress 64GB of data.

Work Experience

Undergraduate researcher, SoCET design team: Purdue   Jun – Aug 2019

   Created TCL synthesis scripts for place and route of custom IC. Worked to create power distribution and mitigate via corrosion during fabrication.

Grader, ECE369: Discrete Mathematics   Jan – May 2019

   Student grader for Discrete Mathematics course covering theory of computation.

Raft Guide: Outdoor Adventure Rafting   May – Aug 2018

   Guide on class IV-V whitewater. Responsible for customer satisfaction and safety in demanding and dynamic workplace environment. Trained in swift water rescue (SWR).

Operator: Purdue Rare Isotope Measurement Laboratory   Jan 2016 – May 2018

   Monitored data collection and operation of the particle accelerator during overnight shifts and responded to emergency shutdowns.

Hang Gliding Instructor: Kitty Hawk Kites   May – Aug 2017

   Instructor for a beginner class in hang gliding.

Leadership & Certifications

Eagle Scout, BSA	2014
HAM Amateur Radio Operator, call sign KD9FMZ	2016
Certified Wilderness First Responder (WFR)	2018

Whitewater Kayaking & Caving Consultant   Purdue Outing Club   May 2016 – Present

   Organized and led caving and whitewater kayaking trips. Established a culture that fostered collective leadership and decision making.

Facilitator, participant   EMV Sophomore Leadership Retreat   2016, 2017, 2018

   Participant, and twice facilitator in a leadership retreat exploring inclusive leadership in the classroom and workplace.