

# Nicholas Baron

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## Education

### California State Polytechnic University, Pomona

Will Be Completed December 2022

Master's of Science in Computer Science

### California State Polytechnic University, Pomona

Completed December 2020

Bachelor of Science in Computer Science (GPA: 3.8)

#### *Relevant Coursework:*

Data Structures and Advanced Programming, Design and Analysis of Algorithms, Compilers and Interpreters  
Parallel Processing, Computer Organization and Assembly Programming, Multivariable Calculus

## Work Experience

### Compiler Intern, Xilinx/AMD, CA

May—August 2022

- Developed and tested libXAIE to AirBin pipeline
- Contribute AirBin lowering to MLIR-AIE

### Compiler Intern, Wind River Systems, CA

June—December 2021

- Shipped an updated version of Rust for VxWorks
- Ported an open-source implementation of UbSan for the Diab7 compiler

### Software Engineering Intern, Murcal, Inc., Palmdale, CA

May—August 2019

- Developed and documented a framework that will be used on future embedded systems
- Created and designed multi-threaded features from feedback given by team members
- Worked in a semi-independent development role to iterate on the project

## Extracurricular Projects

### little-lang

Fall 2019

- Used third-party tools to assist in building and generating code for the project
- Researched compiler concepts related to the project, improving the code from said research
- Improved project specification after project had begun, adding comprehensibility
- Documented accepted language with example code and used examples for testing

### Prime Finder 2

Spring 2019

- Developed models to better understand parallel processing concepts
- Implemented a safe multithreading model for scalability
- Optimized multithreaded code to improve perceived performance

### COG-Engine

Spring 2019

- Published API documentation and examples for users of the project
- Extended already existing free software to allow custom functionality
- Used tools which support multiple platforms for ease of distribution

## Technical Skills

- |           |                          |                                   |
|-----------|--------------------------|-----------------------------------|
| • C++     | • Linux (Debian, Ubuntu) | • git / GitHub, Bitbucket         |
| • Rust    | • Shell Scripting (Bash) | • Microsoft Visual Studio         |
| • Haskell | • make                   | • L <sup>A</sup> T <sub>E</sub> X |
| • Java    | • CMake                  | • Assembly (MIPS)                 |