

# Ian Pratt

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## EXPERIENCE

### WINDY CITY LAB | SOFTWARE/HARDWARE INTERN

June 2022 – August 2024 (summers) | Chicago, IL, USA

The Windy City Labs is a company focused on consulting and educating for companies and schools interested in IoT and embedded technologies. This internship took the course of 3 summers, where, working both alone and with a team, I helped to:

- Teach kids aged 14-18 the basics of CPU architecture, computer design, IoT and engineering.
- Design and develop hardware and software for use in teaching the above, including a customizable assembler for a custom CPU architecture.
- Create mocking applications and supporting libraries for testing hardware devices, used in conjunction with projects at the Mayo Clinic.

### CHIP\_23LCV | SOLO DEVELOPER - HARDWARE LIBRARY

July 2022 – December 2023

- Solo developer for this library, used to interface with the 23LCV\* chips.
- Custom-built to read and write to and from multiple chips as if they were a single, larger chip – reading across storage boundaries and supporting automatic capacity detection.

### NAND7400 | SOLO DEVELOPER - ASSEMBLER

June 2023 – August 2023

- Solo developer for the NAND7400 Rust library, used in conjunction with the custom CPU architecture used in the Windy City Lab internship.
- NAND7400 parses, assembles, and formats the assembly code for the CPU, and binds into Swift as well, as it was used in a SwiftUI-based application.

### DOTBAK | SOLO DEVELOPER - FILE SYNC UTILITY

Feb 2023 – July 2023

- Solo developer of the Dotbak utility, made on my own off-time.
- Dotbak synchronizes dotfiles (as well as any other files in a user's home directory) and backs them up to a git repository.
- Written in Rust, distributed as a singular binary for deployment on any user's machine.

## AWARDS AND CERTIFICATIONS

2024 Illinois State Scholar  
2024 National Merit Scholar  
2024 National Cyber Scholarship Awardee  
2024 GIAC GFACT Cybersecurity Certification

## EDUCATION

### IMPERIAL COLLEGE LONDON

BENG IN COMPUTING

Expected June 2027 | London, UK

## SKILLS

### PROGRAMMING

3+ years:

Python • JavaScript • C/C++

1+ years:

Rust

0+ years:

Swift • Haskell • Kotlin

### TECHNOLOGY

Git/Github • KiCad • Linux

CLI Apps • Embedded software

UNIX • Server-Side

## COURSEWORK

### UNDERGRADUATE

Computing Practicals

(Multiple programming languages)

Calculus and Linear Algebra

Graphs and Algorithms

Computer Systems & Architecture

## LINKS

Github: [cogsandsquigs](https://github.com/cogsandsquigs)

Website: [cogsandsquigs.dev](https://cogsandsquigs.dev)