

# Karl Hallsby

karl.hallsby.com

karl@hallsby.com

LINKEDIN: karlhallsby

## Education

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### Illinois Institute of Technology

*M.S. Computer Engineering, Specializing in Computer Systems Software*, Expected 2022.

*B.S. Computer Engineering*, Expected 2022. **GPA: 3.962**

**Lunds Tekniska Högskola** Lund, Sweden. 2019 — 2020 (Study Abroad)

#### Course Work

Digital System Design	DC/AC Circuit Analysis	Computer Architecture and Assembly
Thermo-Fluid Dynamics	Probability and Statistics	Complex Variables and Matrix Algebra
Secure System Design	Network Architecture	Concepts of Programming Languages
Systems Programming	Functional Programming	Object-Oriented Programming
Compilers	Operating Systems	Data Structures and Algorithms

## Proficiencies

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### Programming Languages

- C
- MC68k Assembly
- MIPS
- Java
- Python 3
- Haskell

### Hardware

- Oscilloscope
- Analog/Digital Function Generator
- Digital Logic Analyzer

### Software

- Git
- L<sup>A</sup>T<sub>E</sub>X
- LINUX
- NIX
- Microsoft Office Suite

### Human Languages

- English, Native.
- Spanish, Fluent.
- Swedish, Beginner.

## Professional Experience

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**Mazarine Ventures**, Chicago, IL

*Technical Specialist — Intern*

JUL 2020 — AUG 2020

MAY 2019 — AUG 2019

- Automated and refined deal flow database with partners in VC firm
- Redesigned and optimized website
- Unified digital presence through common media collection and sharing tool
- Organized and documented networking configuration of firm's online resources

**Nalco Water, an Ecolab Company**, Naperville, IL

*Technical Manual Specialist — Intern*

MAY 2018 — AUG 2018

DEC 2017 — JAN 2018

- Reviewed, revised, edited, and drafted technical manuals for water treatment equipment
- Revised training materials for new employees and helped develop training curriculum
- Created automated templates and formatting macros for others to use in developing new manuals adhering to department standards
- Developed code in VBA for automated pricing tools, integrating MS Word and MS Excel, and developed training materials for sales team
- Leveraging Adobe RoboHelp, converted manuals to a cloud-based HTML5 version, allowing access to manuals from mobile phones, tablets, and laptop computers

**Starbucks**, Geneva, IL

*Barista*

MAY 2015 — AUG 2017

- Handcrafted beverages
- Cleaned facilities to exceed health inspections
- Trained new employees on drink creation and standards

## Other Activities

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### TRIANGLE FRATERNITY, ARMOUR CHAPTER

#### HOUSE MANAGER, CHAPTER EXECUTIVE BOARD AND FILESERVER/WEBSITE ADMINISTRATOR

- Keep facilities in livable condition.
- Organize regular House duties and pre-semester work week.
- Maintain chapter website.
- Replaced outdated Linux server with new FreeBSD-based system.
- Determined requirements and budget, obtained funds from National organization, and replaced hardware.

### nixpkgs CONTRIBUTOR

Redesigned the GNU Octave definition to allow for declarative installation and management of add-on libraries.

### home-manager CONTRIBUTOR

Refactored `mbsync` configuration module to allow for more granular control over how email is fetched.

Added configuration module for the `mu` email indexing and searching program.

### CYBERHAWK SECURITY

Participate in bug bounties, capture-the-flag competitions

### ETA KAPPA NU, HKN

Member of IEEE honor society

### TAU BETA PI, TBII

Member of Engineering Honor Society

### MARTIAL ARTS CLUB

Vice President (2018).

3<sup>rd</sup> Degree Black Belt.

Tang Soo Do Instructor.

## Honors

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<b>Illinois Institute of Technology</b> — Dean's List	2017 — PRESENT
<b>Illinois Institute of Technology</b> — Camras Scholarship	2017 — PRESENT
Batavia High School — Highest Honor Roll (> 4.375 GPA)	2013 — 2017