

Karl Hallsby

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Education

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

Programming Languages

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

Hardware

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

Software

- Git
- L^AT_EX
- LINUX
- NIX
- Microsoft Office Suite

Human Languages

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

Professional Experience

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

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).

3rd Degree Black Belt.

Tang Soo Do Instructor.

Honors

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