

Kirk Easterson

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Education

KTH Royal Institute of Technology

Masters of Science - Computer Science: Machine Learning Specialization

STOCKHOLM, SWEDEN

Aug 2019 – Dec 2021

Stony Brook University

Non-Matriculated Graduate Student

NEW YORK, USA

May 2017 – May 2019

State University of New York at Fredonia

Bachelors of Arts – Applied Music

NEW YORK, USA

Aug 2012 – May 2015

MIT Experimental Learning

Certificate Course: Big Data and Social Analytics

MASSACHUSETTS, USA

May 2016 – Aug 2016

Skills

Languages: C#, F#, Python, Javascript, Java, SQL, C, C++, Bash, Prolog, SML, MIPS, \LaTeX

Software: Git, Ansible, Fable, React, PostgreSQL, MongoDB, TeamCity, GoReplay, Mailgun, jQuery, Jupyter, Vim, JetBrains IDEs

Experience

Loop54 – Full stack developer

Mar 2020 – present

- Designed and built large portion of customer portal. Frontend: *Fable* with *Ant Design* library, backend: C# with *PostgreSQL* and *MongoDB*
- Built internal tools in C# for Product Specialists to process customer product information
- Wrote various bash scripts for git hooks and capturing network traffic

Saab AB – Masters Thesis

May 2021 – Dec 2021

- Built tool in *Python* to automate testing for open-source software defined networking tool *P4*
- Implements *Microsoft's* open-source tool *PICT* to generate and run combinatorial test cases
- Implements *Packet Test Framework* (PTF) to run the test cases
- Work continued from Research Assistant position at KTH (*see below*)

KTH – Research Assistant

Mar 2020 – Mar 2021

- Partnership with KTH and Saab AB to capture network traffic in open-source software defined networking tool *P4*
- Built with *Python* using the Observer design pattern

Maharam – Applications Engineer Intern

Mar 2019 – Aug 2019

- Wrote over 3,000 lines of Java and BBJ to assist with data migration to SQL Server
- Rewrote original code to reduce overnight push time from 12 hours for 10 tables to 8 hours for over 750 tables

The Paramount – Stage Manager

May 2015 – May 2019

- Stage-managed over 100 acts in a 1,500 seat entertainment venue
- Worked with artists such as The Beach Boys, Fergie, Joe Jonas, Meatloaf, Weird Al, and Train

The Town Pants – Musician (Upright Bass & Piano)

May 2014 – May 2017

- Toured in an internationally established Irish folk band
 - Played with musicians such as Zac Brown, Cory Henry, and George Millar
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Projects

Duckhunt AI – Java

Aug 2019 – Sep 2019

- Designed an artificial intelligence to play Duckhunt
- Used Hidden Markov Models to predict location and species of duck

Multi-Threaded Transactional Object Store Database – C

Nov 2018 – Dec 2018

- Use of POSIX threads and multi-threading safety
- Attained concurrency guarantees with use of semaphores, mutexes, and proper thread execution
- Handled host-to-many-client connection with low-level socket programming

Vendor – Java, JDBC, and MySQL

Nov 2018 – Dec 2018

- Created a full-stack web app for an online auction house
- Fully functioning website similar to *eBay* where users can buy or sell items

RUDP – Python

September 2018 – October 2018

- Wrote a reliable user datagram protocol implementation
- Heavy use of the Python socket library
- Features 2-way file sharing and simulated packet loss

Segregated Freelist Memory Manager – C

Nov 2018 – Dec 2018

- Dynamic memory allocator for the x86-64 architecture
- Emulates C standard library functions `malloc`, `realloc`, and `free`
- Features best-fit placement policy and immediate coalescing on `free` with adjacent free blocks.

SBUScript – PLY(Python, Lex, Yacc)

June 2018 – July 2018

- Built a complete compiler for Java
 - Extensive use of the PLY parser generator
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