

Kirk Easterson

Stony Brook University PhD Applicant for Fall 2019

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kirkeasterson.com



github.com/kirkeasterson

Education

Stony Brook University

STONY BROOK, NEW YORK

Non-Matriculated Graduate Student – Computer Science

August 2017 – present

System Fundamentals I & II, Principles of Database Systems, Computer Networks, Principles of Programming Languages, Introduction to the Theory of Computation, Computer Science I-III, Foundations of Computer Science, Probability Theory, Finite Mathematical Structures, Linear Algebra

MIT Experimental Learning

CAMBRIDGE, MASSACHUSETTS

Certificate Course: Big Data and Social Analytics

May 2016 – August 2016

Analyze user's mobile phone data with Python, Jupyter Notebooks, and AWS to predict location and communication habits

SUNY Fredonia

FREDONIA, NEW YORK

Bachelor's of Arts – Applied Music

August 2012 – May 2015

Calculus I & III, Visual Basic I & II, Introduction to Information Systems

Experience

Freelance – Programmer

Sep 2018 – Nov 2018

- Reformatted Python data science modules into Cython
- Implemented memoryviews to improve efficiency in accessing NumPy arrays

Gentoo Linux – Translator

May 2018 – present

- Contributed to an open source, volunteer-driven Linux distribution
- Translated over 50 pages of documentation and handbook into Norwegian and Swedish

Fire Rescue Systems – Software Engineer Intern

May 2017 – August 2017

- Wrote code and documentation for C++ and Java
- Maintained code for emergency-response dispatch software used throughout Suffolk and Nassau county
- Operated exclusively with Git

The Paramount – Stage Manager

May 2015 – present

- Stage-managed over 100 acts in a 1,500 seat entertainment venue
- Worked with artists such as 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
 - Performed in places such as Dublin, Edinburgh, London, New York City, Hawaii, Quebec, and Vancouver
 - Played with musicians such as Zac Brown, Cory Henry, and George Millar
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Projects

Multi-Threaded Transactional Object Store Database – C

Nov 2018 – Dec 2018

- Use of POSIX threads and multi-threading safety (CSE 320: *System Fundamentals II*)
- Provides concurrency guarantees with use of semaphore, mutexes, and proper thread execution
- Low level socket programming to create host to many-client connection

Vendor – Java, JDBC, and MySQL

Nov 2018 – Dec 2018

- Created a full stack online auction house (CSE 305: *Principles of Database Systems*)
- Fully functioning website similar to eBay where users can buy or sell items in an auction house

TCP Key Value Pair Server – Python

September 2018 – October 2018

- Engineered a key-value pair server featuring Python socket library (CSE 310: *Computer Networks*)
- Implements TCP network protocol in communications
- Utilizes proper HTTP server responses

Segregated Freelist Memory Manager – C

Nov 2018 – Dec 2018

- Dynamic memory allocator for the x86-64 architecture (CSE 320: *System Fundamentals II*)
- 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 (CSE 307: *Principles of Programming Languages*)
- Extensive use of the ply parser generator