Kirk Easterson

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Education

Stony Brook University — Stony Brook, New York
Non-Matriculated Graduate Student — *May 2015 – Aug 2015 ; May 2017 – present*

State University of New York at Fredonia — Fredonia, New York
Bachelor's of Arts – Applied Music — *Aug 2012 – May 2015*

Suffolk County Community College — Selden, New York
Network Design and Administration — *Aug 2015 – May 2016*

MIT Experimental Learning
Certificate Course: Big Data and Social Analytics — *May 2016 – Aug 2016*
Analyze user's mobile phone data with Python, Jupyter Notebooks, and Amazon Web Services to predict location and communication habits

Experience

Freelance – *Programmer* — *Sep 2018 – Nov 2018*
- Reformatted over 4,000 lines of Python data science modules into Cython
- Implemented contiguous 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
- Gained professional experience 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 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
- 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

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*)
- 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 (*CSE 305: Principles of Database Systems*)
- Fully functioning website similar to *eBay* where users can buy or sell items

TCP Key Value Pair Server – *Python* — *September 2018 – October 2018*
- Engineered a key-value pair server using Python socket library (*CSE 310: Computer Networks*)
- Implements TCP for communication
- 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