

Kirk Easterson

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Education

KTH Royal Institute of Technology <i>Masters of Science - Computer Science</i>	STOCKHOLM, SWEDEN Aug 2019 – Jun 2021
Stony Brook University <i>Non-Matriculated Graduate Student</i>	NEW YORK, USA May 2017 – May 2019
State University of New York at Fredonia <i>Bachelors of Arts – Applied Music</i>	NEW YORK, USA Aug 2012 – May 2015
MIT Experimental Learning <i>Certificate Course: Big Data and Social Analytics</i>	MASSACHUSETTS, USA May 2016 – Aug 2016

Skills

Languages: Java, Python, SQL, Javascript, C/C++, Bash, CSS, HTML, Prolog, SML, MIPS, \LaTeX
Software: Git, SQL Server Management Studio, Jupyter, AWS, Pro Tools, Ableton, Photoshop, Blender, VMware

Experience

Maharam – Applications Engineer Intern • 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	Mar 2019 – Aug 2019
Freelance – Programmer • Reformatted over 4,000 lines of Python data science modules into Cython • Implemented contiguous memoryviews to improve efficiency in accessing NumPy arrays	May 2018 – Aug 2018
Fire Rescue Systems – Software Engineer Intern • 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	May 2017 – August 2017
The Paramount – Stage Manager • 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	May 2015 – May 2019
The Town Pants – Musician (Upright Bass & Piano) • 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	May 2014 – May 2017

Projects

3D Tic Tac Toe AI – Java • Designed an artificial intelligence to play a 3-dimensional tic tac toe • Implemented min-max algorithm to determine the optimal move for each player • Incorporated beta-alpha pruning and iterative deepening to decrease performance time	Sep 2019 – Oct 2019
Duckhunt AI – Java • Designed an artificial intelligence to play Duckhunt • Used Hidden Markov Models to predict location and species of duck	Aug 2019 – Sep 2019
Multi-Threaded Transactional Object Store Database – C • 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	Nov 2018 – Dec 2018
Vendor – Java, JDBC, and MySQL • Created a full-stack web app for an online auction house • Fully functioning website similar to eBay where users can buy or sell items	Nov 2018 – Dec 2018
RUDP – Python • Wrote a reliable user datagram protocol implementation • Heavy use of the Python socket library • Features 2-way file sharing and simulated packet loss	September 2018 – October 2018
Segregated Freelist Memory Manager – C • Dynamic memory allocator for the x86-64 architecture • Emulates C standard library functions <code>malloc</code> , <code>realloc</code> , and <code>free</code> • Features best-fit placement policy and immediate coalescing on <code>free</code> with adjacent free blocks.	Nov 2018 – Dec 2018
SBUScript – PLY(Python, Lex, Yacc) • Built a complete compiler for Java • Extensive use of the PLY parser generator	June 2018 – July 2018
