Eryk T. Helenowski

eryk@helenowski.com • (847) 769 4473 • 365 Bateman Road, Barrington, Illinois 60010 • github: ehelenowski

Education

University of Illinois At Urbana-Champaign | August 2015 - May 2019

BSEng: Computer Science | GPA: 3.97 / 4.00

Honors: James Scholar • Dean's List • National Society of Collegiate Scholars • Phi Eta Sigma National Honor Society

Relevant Coursework: Intro to Computer Science, Discrete Mathematics, Data Structures, Computer Architecture, Systems Programming, Numerical Methods, Algorithms, Computational Photography, Physics: Mechanics, Physics: E&M, Physics: Thermal Physics, Differential Equations, Linear Algebra

Experience

Software Engineering Intern: Facebook (Menlo Park, CA) | May 2018 - *

Software Engineering Intern: CME Group (Chicago, IL) | May 2017 - August 2017

- CME Group operates the largest financial exchange for futures and derivatives in the world
- Created an automated system to maintain the availability of incoming external market data in real time, resilient to evolving schemas, along with a complimentary RESTful API for query access using a Hive Metastore for the backend
- Architected a framework for consolidating these disparate schemas from 403 sources and 20+ million files
- Utilized the various parts of the AWS and Apache ecosystems including Lambda, DynamoDB, EMR, and Hive

Adversarial Machine Learning Research (Champaign, IL) | January 2017 - May 2017

- Conducted research under PhD student Vincent Bindschaedler, with the goal of mimicking the ALYEIN API
- Constructed a deep bidirectional LSTM recurrent neural network for sentiment analysis
- Created a new data set of 5,000 tweets labeled by the ALYIEN API for sentiment analysis training
- Achieved 70-80% accuracy ternary classification mimicking of the sentiment analysis portion of ALYIEN API

Software Engineering Intern: TKH Group (Gurnee, IL) | May 2016 - June 2016

- Developed automated workflows for online processes with speeds several times faster than manual data entry
- Provided technical support to the Stereotactic Radiosurgery Institute- surgical center in Gurnee, Illinois

Personal Projects

Texture Synthesis and Transfer | September 2017

- Created generative texture synthesis models implemented with image quilting algorithms of varying complexities
- Repurposed the underlying image quilting algorithm with a modified cost function, to transfer texture to a new image

Raspberry Pi Cluster | January 2017 - May 2017

- Built a computing cluster with a group of interconnected Raspberry Pi's, that perform tasks in a parallel
- Constructed a distributed architecture capable of supporting several nodes and interfaces, with the goal of achieving a reliable, efficient, and fault-tolerant system, using techniques such as non-blocking I/O and multithreading

File Sharing Application | April 2017

- Built a high performance Ubuntu server and client for a mock file sharing app, using low level C programming
- Implemented a custom messaging protocol built on top of TCP/IP utilizing non-blocking I/O

Roll A Ball 2 | December 2016

- Wrote a roll a ball game with Unity and C#, the objective is to collect a series of items
- Included custom game logic such as warp squares, stop pills, jumping, and a rudimentary adversarial AI

Text Adventure Game | November 2016

- Created a text adventure game written fully in Clojure, a general purpose functional programming language
- Devised a main game simulation loop that incorporates immutable data structures

Primary Skills

C • C++ • Java • Python • Matlab • Algorithms • Data Structures • Systems Programming • Math • Statistics • AWS • Git • SVN