Eric C. Clinch

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EDUCATION

August 2016 – May 2019 **Carnegie Mellon University School of Computer Science** **3.9/4.0 GPA**
August 2014 – May 2016 **University of North Texas** **4.0/4.0 GPA**

Coursework

- AI Representation and Problem Solving, Machine Learning, Great Ideas In Theoretical Computer Science, Probability, Calculus in 3D, Matrices and Linear Transformations

WORK EXPERIENCE

Software Engineering Intern at BorrowersFirst May 2017 – August 2017
Software Engineering Intern

- Ported BorrowersFirst's Kafka libraries to Java, increasing stability and saving the company approximately $15,000 annually from Kafka downtime and servicing.
- Built a data analysis and visulation tool for BorrowersFirst's internal data streams using Java, Kafka, and Neo4j.
- Developed BorrowersFirst's AWS deployment process for Java projects using Docker and Ansible.
- Modified an existing tool that edited encrypted configuration files to be compatible with Java and Typescript projects. This decreased the deploy time of these projects by approximately 1 hour per deploy.

Carnegie Mellon University November 2016 – May 2017
Theorem Proving and Formal Verification Researcher

- Worked with Dr. Avigad at Carnegie Mellon University to conduct research on Automated Theorem Proving, Formal Verification, and the development of Lean, a theorem proving computer language.

Solis Security May 2016 – April 2017
Security Intern

- Worked with the SIEM software Splunk to perform network data aggregation and data analysis.
- Performed risk assessment analysis on the security protocols and configuration of software.

The University of North Texas May 2015 – 2016
Gas-phase Kinetic Chemistry Researcher

- Researched gas-phase kinetic chemistry in Dr. Paul Marshall's lab. Used Infrared Spectrometry and data analysis tools to determine the rate of decay of various hydrofluorocarbons.
- Published a paper on the results of the research in the Journal of Physical Chemistry.

PROJECTS

2017 **LightRiders:** an AI to compete in the Riddles.io Tron competition. The project is written in Java and uses Computational Game Theory, Graph Theory, and the results of a Genetic Algorithm to determine the AI's strategy.

2017 **Space Invaders AI:** Trained a Neural network to play the Space Invaders video game. A supervised learning algorithm was used to initially train the neural net, and then a genetic algorithm was used to improve the network.

2016 **Proper Proofer**: a propositional logical theorem writing and proofing tool written in Python. Uses the Monien-Speckenmeyer 3-SAT solver to verify proposition validity, a propositional Tableaux algorithm to find a proof of a propositional statement, and finally Tkinter graphics to display the constructed proof. https://www.youtube.com/watch?v=2baqzq65ZZs

SKILLS

Programming Languages and frameworks

- Proficient: Java (Spring Boot, Maven), Python; Familiar: C++, C, Node.js, Git

LEADERSHIP & AWARDS

- TA for 15-112: Fundamentals of Programming and Computer Science
- Current ranked as the #1 US competitor in the Riddles.io LightRiders and Golad AI competition.
- Dean's List every semester at both Carnegie Mellon University and The University of North Texas.
- Siemens Competition in Math, Science & Technology semifinalist