Luke Daniel Ritchie

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Objective

- To obtain a TA position in a Computer Science or Engineering related subject.

Experience

TUTOR | TAU BETA PI | SEPTEMBER 2019 – CURRENT

- Tutoring fellow students in undergraduate engineering, computer science, and mathematics courses

EXTENDED SOFTWARE DEVELOPMENT INTERN | HUMANA | SEPTEMBER 2019 – DECEMBER 2019

- Working to develop and deploy a full stack application to speed up internal project estimation methods

SOFTWARE DEVELOPMENT INTERN | HUMANA | MAY 2019 – AUGUST 2019

- Worked to develop a full stack web application to centralize Humana-specific Splunk applications

SPOKESPERSON AND CO-FOUNDER | 1DEA | AUGUST 2018 – FEBRUARY 2019

- Spokesperson and leader of 1dea, an engineering startup dedicated to rapid prototyping and design

TRADE RESEARCHER | RTM CAPITAL ADVISORS | JUNE 2018 – AUGUST 2018

- Researched potential trading strategies, developed tests, conducted experiments, reported to team daily.

Skills & Abilities

PROGRAMMING SKILLS

- **Strong:** Python (Flask, SQLAlchemy), Javascript/NodeJS (Vue.JS)   **Familiar:** C++/C, Java, PHP, SQL, HTML/CSS

COMMUNICATION SKILLS

- Capable presenter and experienced spokesperson, 1st place at Spark Pitch Competition, member of the Acoustikats, the University of Kentucky's premiere performing group.

WORKPLACE SKILLS

Agile Methodologies (Kanban, Scrum), Azure Dev Ops, Git, Overleaf, Markdown, Microsoft Office

Education

BACHELORS IN COMPUTER SCIENCE | MAY 2020 | UNIVERSITY OF KENTUCKY

- Major: Computer Science | Cumulative GPA: 3.4 | Deans List Spring 2019
- Minors: Mathematics, Vocal Performance
- Related coursework: Machine Learning, Intro to Artificial Intelligence, Systems Programming, Algorithm Design/Analysis, Graphics and Multimedia, Logic/Theory of Computing, Intro to Database Systems, Intro to Numerical Methods, Web Programming, Introduction to Computer Networking, Matrix Algebra

MASTERS IN COMPUTER SCIENCE | MAY 2021 | UNIVERSITY OF KENTUCKY

- Major: Computer Science | Cumulative GPA: 4.0
- Focus: ML and AI, Reinforcement Learning, sequential problems, game-playing
- Related coursework: Sequential Decision Making, Intermediate Topics in Database Systems, Models of Computation

Projects

- **Strategy Generation for Agents with Differing Action Spaces**: A Reinforcement Learning project using a simple REINFORCE implementation focused on examining the differences in policies between agents with different action spaces.
- **Using REINFORCE to Solve Cart-Pole**: A Reinforcement learning project involving the implementation of the REINFORCE algorithm to train an agent to maintain the balance of a pole upon a moving cart.
- **Brain Dump:** A ML application using affect analysis to generate spirograph-like images that are indicative of the tones of various journal entries. Uses Azure Pipelines to automatically build, test, and deploy front-end changes.
- **Auto-Blinds:** A prototype device that automatically adjusts blinds to achieve a user-designated light-level.
- **Github:** https://github.com/Ritchieluk

Awards & Accomplishments

- University Scholar, Deans List, National Merit Scholar, Academic All-State, AP Scholar
- Presenter at EKU Symposium of Mathematics and Statistics, Entrepreneurship Bootcamp Finalist
- Splunk Fundamentals Certified, NVIDIA Fundamentals of Deep Learning for Computer Vision Certified

Interests & Learning Focuses

- Reinforcement Learning applications, Drama Management, Planning, Natural Language Processing, CI/CD Pipelines