Eli Turner

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EDUCATION

University of Michigan Ann Arbor, MI
Bachelor of Science in Engineering in Engineering Physics
Minor in Mathematics, Focus in Aerospace Engineering April 2018

PROJECT EXPERIENCE

Independent Projects

Buzzing Bee March 2020

- Built interactive web game modeled after NYT's Spelling Bee
- Utilized Webpack and Node Package Manager in order to achieve clean, easily modifiable code

US Border Crossing Analysis Program December 2019

- Extracted data on US border crossings from large, unorganized dataset provided by the US government
- Organized dataset and began tracking running monthly averages for border crossings at each border
- Sorted data by four different metrics in priority order and loaded into CSV file for easy analysis

Premiere League ELO Rating Program March 2019

- Used BeautifulSoup4 to scrape multiple web pages for recent Premier League Scores
- Applied the Chess rating system (ELO) to each team in order to track and predict future outcomes
- Parsed and manipulated data using Pandas to allow trends to be graphed and visualized

Aerospace Senior Design

Space Mission Analysis and Design

- Simulated a parawing descent in the Martian atmosphere using a physics based model in python
- Designed a planetary-gearbox in order to reduce mass, volume, and torque requirements for parawing-tip actuators
- Calculated detailed parameters for drag and lift of parawing using XFOIL and AVL

WORK EXPERIENCE

Bridges Rock Gym March 2019 – Present
Desk Staff and Belay Staff

- Ensured proper opening of gym, including facility maintenance, cleaning, and preparation for events
- Handled customer service requests including membership agreements, customer complaints, and event coordination
- Supervised and assisted in group events ranging from children's birthday parties to company retreats
- Voted "Most Valuable Desk Staff" of 2019 by managers of the gym

University of Michigan January 2018 - April 2018
Research Assistant – Plasmadynamics and Electric Propulsion Laboratory

- Fabricated a waterfall board using scroll saw and drill press to minimize systematic error from wire tension
- Fabricated nylon thimble using drill press and lathe to replace standard tape in order to prevent electrical arcing
- Designed a new waterfall board to fix problems such as hole spacing and placement from previous board
- Calibrated and tested pressure in a vacuum chamber in order to gauge various ampacities of wires.

RELEVANT COURSEWORK & COMPUTER SKILLS

Computer Science | Introductory Elements of Programming, Programming Data and Structures
Math | Single Variable Calculus, Multivariable Calculus, Differential Equations, Linear Algebra, Real Analysis
Languages | Python, C++, HTML & CSS, Javascript (ES6)
Applications/Hardware | Git, Atom, Xcode**,** VS Code, Arduino, Google Suite, Microsoft Office