NATHAN SCHNEIDER

schnei.nathan@gmail.com • linkedin.com/in/nathan-schneider22/ • nschneider.me

EDUCATION

Dartmouth College, Hanover, NH **June 2022**
Bachelor of Arts, Major in Computer Science **GPA 3.75**
Relevant Coursework: Software Design, Algorithms, Machine Learning, Artificial Intelligence. **Major GPA 3.83**
Honors/Awards: Citation for Academic Excellence in Intro. CS, OOP, Machine Learning
Activities: Dartmouth Climbing Team Leader, Dartmouth Mountaineering Club

SKILLS

Programming Languages: Python, JavaScript, C, Java, Arduino
Web Development: React.js, Node.js, Redux.js, Ruby on Rails, SQL, MongoDB, Heroku, Netlify, Insomnia
Data Science: Python, NumPy, Pandas, Jupyter, Scikit-Learn, Pyplot, SQL
Office: Git, Slack, Github, Zoom, Zenhub, Microsoft Office, Google Drive
Other: Strong communication skills, Diverse mathematics background, Interdisciplinary team experience

WORK EXPERIENCE

Computer Science Department at Dartmouth College, Hanover, NH **December 2020 - Present**
Data Science Researcher

- Utilized Unix scripting tools, Python, and Ctypes, to quickly parse and transform massive datasets
- Aggregated, summarized, and anonymized 15+ years of Wifi Syslog files for research distribution

DALI Lab, Hanover, NH **December 2019 - Present**
Full-Stack Software Engineer

- Collaborated with an interdisciplinary Agile team to design, develop, and deploy web apps
- Engaged in 18+ hour work weeks on DALI Lab projects while maintaining full course load
- Implemented multiple tech stacks dependent on project needs
- Contributed to many diverse projects over multiple terms
    - Project Pine Beetle - a web platform to visualize and predict outbreaks of Southern Pine Beetle
    - GoPhish - an education tool to teach users to identify and prevent phishing attacks
    - SLAR - Sign Language Augmented Reality game to teach finger spelling
    - Vox Daily - Modernization of campus email news system

Laboratory for Atmospheric and Space Physics, Boulder, CO **June 2019 - September 2019**
Data Science Intern

- Using Python and LabVIEW, designed and implemented a database analysis tool for accelerator functionality
- Provided curated graphics and metrics for novel insights on both live and historical data
- Iteratively improved user interface and capabilities based on projected user needs

Dartmouth College, Hanover, NH **March 2019 - Present**
Tutor, Computer Science

- Worked with individual students to understand and extend computer science concepts
- Analyzed and targeted weaknesses in student understanding to teach tutees more efficiently

Cognitive Science Department at Dartmouth College, Hanover, NH **March - May 2019, November 2020**
Full Stack Software Engineer

- Using Node.js, jsPsych, MySQL, developed and deployed a secure web platform for psychological surveys
- Implemented configurable architecture, so non-coder researchers are able to edit study-specific parameters

NATHAN SCHNEIDER

schnei.nathan@gmail.com • linkedin.com/in/nathan-schneider22/ • nschneider.me

PROJECT EXPERIENCE

Squirrel-Cam Bird Feeder Defense System **June 2020 – Present**

- Integrated Near-Infrared (NIR) spotlight and NIR camera system to surveil bird feeders at all times
- Utilized Tensorflow object recognition models to differentiate birds and squirrels on the feeders
- Designed Python code on a Raspberry Pi to control irrigation valves to spray detected squirrels

Moonboard™ Difficulty Classification Neural Networks **September 2019**

- Retrieved and cleaned community climbing route data from Moonboard™
- Trained and tested deep neural networks to predict climbing route difficulty
- Experimented with data weights to avoid erroneous classifications due to overrepresented data

SendStick: Indoor Climbing Training Tool **March 2020 - Present**

- Designed and prototyped visual tracking and projecting software for climbing training
- Utilized NIR(Near-infrared) emitters and cameras to guarantee tracking with any lighting conditions or distance
- Consulted climbing coaching industry professionals on potential use cases and desired features

Robotic Hand **January 2018 - June 2018**

- Collaborated with a teammate to design, program, prototype, and fabricate a robotic hand to mirror hand motions
- Utilized CAD software to design and 3D print each part
- Analyzed and calibrated control sensor data in real time on the Arduino platform
- Applied a rapid prototype revision approach to improve the product for from tester feedback

Computer Opponents **February 2018 - January 2019**

- Applied various algorithms to create AI players for games Tic Tac Toe, Hangman, Sudoku, and Connect 4
- Leveraged the strengths of specific data structures to reduce computational runtime
- Implemented algorithms such as minimax, and Monte Carlo Tree Search
- Investigated success rates between hard-coded strategy and computation-heavy algorithms