Andrew Lepetri

Computer Scientist and Mechanical Engineer

✉ lepetriandy@gmail.com   ☎ 619-971-0042   **Linked** in. linkedin.com/in/andrew-lepetri   ⬤ github.com/alepetri   Ⓐ alepetri.github.io

Professional Experience

Systems Engineer @ Northrop Grumman
March 2019 - Present // Rancho Bernardo, CA

- ☛ Execute Modeling, Simulation, and Analysis in support of adding future capabilities onto an Unmanned Aircraft System (UAS)
- ☛ Perform Risk Reduction by modeling Sense-And-Avoid functionality onto a UAS, flying the emulated UAS in various airspace environments to collect and analyze critical safety metrics, characterizing the benefits and challenges potential additions would have on the system
- ☛ Practice requirement generation from industry standards
- ☛ Integrate physical LRUs into a Hardware in the Loop (HWIL) simulation
- ☛ Create Command and Control Graphical User Interfaces in C#
- ☛ Emulate hardware interfaces in C++: encoding, piping, and handling messages between subsystems
- ☛ Develop a Data Analysis framework in Python using Django, Postgres, and Docker with real-time simulation monitoring capabilities
- ☛ Execute trade studies using Monte Carlo runs to generate statistics to aid decision making
- ☛ Work with an Agile team of engineers to develop and improve software using Git configuration control
- ☛ Create process automation tools in python to increase operational efficiency

Vision Engineer @ Cohu Inc
March 2017 - May 2018 // Poway, CA

- ☛ Contributed within a cross-disciplinary team to research, design, develop, test, and present vision related solutions in processing and sorting thousands of microchips per hour
- ☛ Worked on an array of projects including camera and lighting assemblies, micron precision alignment, device shuttle trays, OCR and 2DID recognition, and vision software applications

Instructional Assistant @ San Diego State University
August 2016 - December 2017 // San Diego, CA

- ☛ Taught and tutored for SDSU's MATLAB Computer Applications course
- ☛ Developed mathematics based assignments to be solved in MATLAB
- ☛ Honed teaching abilities through delivering weekly recitations sessions to students
- ☛ Unpacked complex engineering and programming topics into understandable lessons

Biomechanical Researcher @ San Diego State University
January 2016 - April 2016 // San Diego, CA

- ☛ Performed fiber-based cell migration simulations in MATLAB
- ☛ Modeled key mechanical properties of cells, analyzing their chosen paths through a randomly generated Extracellular Matrix
- ☛ Sourced simulation parameters from scientific journals

Skills

Programming Languages

Python, C++, C#, SQL, JavaScript, MATLAB, Java, HTML and CSS

Technical Tools

Visual Studio, CMake, Git, Docker, Django, Jira, Confluence, Node.js

Education

Georgia Institute of Technology
2021 - Current // Atlanta, GA
(Online Program, 4.0 GPA)
Pursuing a Master of Science in Computer Science with a specialization in Computational Perception and Robotics.
Expected graduation: Spring 2023

San Diego State University
2014 - 2018 // San Diego, CA
(3.54 GPA)
Bachelor of Science in Mechanical Engineering with a Minor in Computer Science
- ☛ Awarded Dean's List Honors (2014-2018)

Projects

SDSU Mechatronics // (2015-2018)
- ☛ Project manager for a team of Mechanical Engineers researching and designing an Autonomous Underwater Vehicle to compete in the AUVSI Robo Sub competition.
- ☛ Developed leadership and interpersonal skills through a simulated work environment.

SDSU IEEE's Aztec Air // (2016-2017)
- ☛ Leader of a team of Electrical and Computer Engineers in constructing and programming a Semi-Autonomous Aerial Vehicle that utilizes inflight sensory interpolation to adjust flight path.

Interests

Chess, Bird Watching, Hiking, Traveling, 3D Printing