ANDREW **LEPETRI**

2051 Running Mare Lane, Alpine, CA 91901 | C: 619-971-0042 | lepetriandy@gmail.com

Profile

I graduated from SDSU in December 2018 with a bachelor's degree in Mechanical Engineering and a minor in Computer Science. I am actively enrolled at Georgia Tech seeking a master's degree in Computer Science. As a highly competent engineer with a diverse portfolio, I can quickly integrate into and support a wide variety of teams and projects. I am passionate about innovative technologies that give creative solutions to cutting edge problems.

Skills

- Main Languages: C++, Python, C#, SQL, JavaScript, Java
- Visual Studio Development and Debugging
- Docker Containerization
- Cross-disciplinary Collaboration
- Git Configuration Control
- Modeling, Simulation, and Analysis
- Django Web Framework
- Requirement Generation from Industry Standards
- Sensor Analysis and Fusion
- Process Automation
- Research and Development
- CAD: SolidWorks 2018 and Fusion 360
- 3D Printing Prototyping
- Project Management
- Documentation and Concise Multimedia Design Presentation

Professional Experience

Systems Engineer: Modeling and Simulation **03/2019 to Present**
Northrop Grumman Corporation **Rancho Bernardo, CA**

Actively working doing Risk Reduction by modeling sense-and-avoid functionality onto an Unmanned Aircraft System (UAS) and virtually flying the UAS in various airspace environments. Relevant subsystems and their interfaces are modeled to simulate the benefits and challenges potential changes would have on the system. Simulation run results are analyzed for critical safety metrics and to verify correct implementation of requirements. Hardware in the Loop (HWIL) functionality is also in development to further reduce risk in integration of physical LRUs.

Tasks include developing Command and Control GUIs in C#, emulating hardware interfaces in C++, piping and handling messages between subsystems, developing a data analysis framework in Python with Django, Postgres Database architecture, executing trade studies (most often through Monte Carlo runs), abstracting and parallelizing subsystems for versatility and performance.

Vision Engineer **03/2017 to 05/2018**
Cohu Inc. **Poway, CA**

Worked independently with a cross-disciplinary team to test, research, catalog, present, design, and develop vision related solutions to process and sort thousands of microchips per hour. Projects worked on include: Camera and lighting assembly and mounting, micron precision alignment, device shuttle trays, OCR and 2DID recognition, and vision software application.

Instructional Student Assistant **08/2016 to 12/2017**
San Diego State University- Mechanical Department **San Diego, CA**

Developed homework to be solved using MATLAB. Held office hours for students of the engineering course MATLAB Computer Applications. Taught recitation sessions to a class of 30 once a week. Proofread exams.

Biomechanical Research **01/2016 to 04/2016**
San Diego State University **San Diego, CA**

Performed fiber-based cell migration simulations in MATLAB, modeling cells with specific mechanical properties and recording their paths through a randomly generated Extracellular Matrix in time-based trials.

Accomplishments

Dean's List - Honors

- Dean's List recognition for Freshman, Sophomore, Junior, and Senior years at SDSU.

Mechanical Project Manager for SDSU Mechatronics

- Former project manager for a team of Mechanical Engineers in 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.

President of IEEE's Aztec Air

- Former 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.

Education

Master of Science: **Computer Science** **2023**
Georgia Institute of Technology (Online) Atlanta, GA, United States of America
4.00 GPA

Bachelor of Science: **Mechanical Engineering** **2018**
San Diego State University San Diego, CA, United States of America
Minor in Computer Science
3.54 GPA