NIKITAS KLAPSIS

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EDUCATION

University of Southern California Los Angeles, CA
Bachelor of Science in Astronautical Engineering May 2026-May 2026
Minor in Applications of Artificial Intelligence
GPA : 3.88 / 4.0
Fall 2022, Spring 2023 Dean's List

SKILLS

- Manufacturing: Manual/CNC mill and lathe, waterjet, 3D printing, TIG welding, Inspection, Quality Assurance
- Software: Siemens NX, Autodesk Inventor, Java, Python, MATLAB, Microsoft Word, Excel, LaTeX, Blender 3D animation

EXPERIENCE

USC Rocket Propulsion Lab Los Angeles, CA
Manufacturing Engineer August 2022-Present

- Machine core components of hypersonic launch vehicle with apogee of 430,000 ft including propellent liners, insulation plates, and bulkheads
- Fabricate flight critical ground support equipment including thrust stand to withstand spaceshot class motors up to 10,000 lbf
- Maintain supply of manufacturing support equipment including welding supplies, PPE, and machine tooling
- Designed, manufactured, and integrated improvements to custom CNC router for carbon fiber and fiberglass plies
- Integrated and troubleshot thrust stand and launch rail onsite resulting in static fire success and subsequent launch to 100,000+ft of prototype launch vehicle

USC Baum Family Makerspace Los Angeles, CA
Machinist June 2023-Present

- Manufacture critical components up to <0.0005in tolerances for all undergraduate engineering teams at USC including Formula SAE, USC underwater submersible vehicle, and more
- Operate mills(CNC and manual), lathes(CNC and manual), waterjet cutter to cut inconel, steel, aluminium, and composites
- Ensure all machines are indicated, calibrated, and clean to maintain tolerances and extend lifetime

First Robotics Competition Team 589 Glendale, CA
Head of Design and Prototyping January 2020-June 2022

- Spearheaded the design of team 589's competition robot for FRC's RAPIDREACT game leading to a regional tournament win
- Prototyped and tested a ball storage and shooter system to accurately shot balls into a hoop from distances up to 10ft
- Instructed new team members on principles of design and engineering, creating a cohesive design team

Crescenta Valley Enterprises Glendale, CA
Software Development Intern January 2019-June 2022

- Developed and taught intro to machine learning course in Python, introducing key concepts through the Pyribs library
- Co-developed an online IDE hosted on a school server so students can run code locally on Chromebooks
- Introduced Java to high school students, teaching AP Computer Science under Dr. Gregory Neat

ACADEMIC PROJECTS

EYEMAPPER Los Angeles, CA
Co-Founder September 2022-Present

- Collaborated to define specific feature list and designed initial prototype of assistive seeing device for blind and partially blind users to enable greater independence and safety
- Identified key user needs, analysed competitor products, and estimated servicable obtainable market of 35,000+ users
- Won USC Viterbi School of Engineering ABC startup competition with grand prize of $1200

Pyribs Lunar lander Tutorial Glendale, CA
Software Engineer August 2021-May 2022

- Created a tutorial for the Pyribs machine learning library using the CMA-ME algorithm originating from Dr. Stefanos Nikolaidis's ICAROS lab, University of Southern California
- Investigated applications of Quality Diversity algorithms with multiple test environments using OpenAI gym Lunar Lander environment, proving a single scenario could be used to train the algorithm for all general scenarios