Louk Goldberg

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Education

University of California, Davis – Davis, CA   *Expected Graduation: December 2022*
Bachelor of Science, Aerospace and Mechanical Engineering
Double Major – GPA: 3.5, Engineering GPA: 3.6

Relevant Coursework
- Orbital Mechanics, Aerospace Stability and Control, Automatic Control of Engineering Systems, Dynamics, Manufacturing Processes, Mechanical Design, Electronic Circuits and Systems, Mechanics of Materials, Statics, Thermodynamics.

Experience

OnSight Technology, Inc. – Davis, CA   *April 2022 – Present*
Robotics Engineering Intern
- Utilizing Python, XML, Unix Shell, and ROS on a Jetson Nano to program an autonomous solar panel inspection robot, with 2 LiDAR sensors mounted at 30° angles, necessitating coordinate transformations and control performed 10 times per second.
- Lead engineer for autonomous navigation algorithm and Gazebo vector-space simulation with 2 sensors – 1000 points each.

AmCyt, Inc. – Davis, CA   *July 2021 – Present*
Robotics Engineer (Seasonal)
- Utilized C++, control theory, and kinematics to program a closed-loop motion control system, capable of smearing samples to within 5 microns of thickness, automating a high-demand job of pathologists. Currently developing the second generation.
- Developed a human-machine interface (HMI) on a Raspberry Pi using Python and serial communication.

OneLoop at UC Davis – Davis, CA   *February 2019 – Present*
Operations Consultant, Former President, and Former Brakes Lead
- Led the team as President from 2020-2021, designing our next-generation hyperloop pod for European Hyperloop Week.
- Competed in the 2019 SpaceX Hyperloop Competition in Hawthorne, California, placing 10th overall and 3rd in the U.S.

HyGenius, Inc. – Davis, CA   *January 2022 – June 2022*
Mechanical Engineer (Part-Time)
- Designed proprietary battery-powered motion-tracking technology and camera modules using Bluetooth Low Energy on ESP32 microcontrollers. Using electrical equipment such as multimeters and soldering irons to build prototypes.

UC Davis MASTeR Lab – Davis, CA   *March 2021 – June 2021*
Undergraduate Researcher
- Developed surface characterization methods to employ in the comparison of three-dimensional data from both real-world testing, and from a finite element model of residual stresses in and around bolt holes in aircraft aluminum.
- Conducted this research under Professor Barbara Linke and her master's student Emily Jonsson.

Advanced Modeling and Aeronautics Team – Davis, CA   *November 2018 – October 2019*
Member of Wings Subteam
- Designed and manufactured wing assemblies under the guidance of Professor Stephen K. Robinson, former NASA Astronaut, after which I competed in the 2019 SAE Aero Design competition in Van Nuys, California.

Projects

Pilot Smartphone Controller – Davis, CA
- Built a Bluetooth keyboard case for iPhone, featuring a keyboard which stows neatly behind the phone, and can be brought to the front when needed to enable easy smartphone control for the visually impaired or those who prefer mechanical keyboards.

Mindspace – Davis, CA
- Developing an app using SwiftUI which will serve as a virtual museum, hosting augmented reality artwork leveraging Apple's ARKit, specifically USDZ and Reality file-types. Led a small group of undergraduate students in exploring a Unity-based approach through my involvement with the Google Developer Student Club (GDSC) at UC Davis.

Skills

- Siemens Suite
- Ansys Suite
- AutoCAD & Fusion

- LabVIEW
- GD&T/MBSE
- CNC/Mill/Lathe

- Pneumatics
- Hydraulics
- Arduino/RasPi

- HTML/JavaScript
- MATLAB
- Python/C++