Kiran Shirish

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EXPERIENCE

Exact Sciences   **Davis, CA**
Engineering Intern - Service and Support   *Jun 2024 - Sept 2024*
- Rapidly designed and engineered custom camera mounts for liquid handling systems
- Established a robust asset tracking system to manage inventory of service workshop
- Analyzed and modified scripts of tumor imaging device to diagnose and fix errors

Passerini Laboratory   **Davis, CA**
Undergraduate Researcher   *Jun 2023 - Present*
- Innovated new equipment to reduce experimental error due to faulty equipment in lab
- Executed protocols such as Western Blot, Flow Cytometry, and Cell Subculture
- Practiced laboratory techniques such as sterilization, micropipetting, and cell culture

EDUCATION

University of California at Davis   **Davis, CA**
Biomedical Engineering, B.S.   *Expected Graduation Date: June 2025*
- Regents Scholarship Recipient | University Honors Program
- Activities and Societies: Biomedical Engineering Society, Regents Scholars Society
- Relevant Coursework: Biomolecular Engineering, Signal Processing, Neurobiology, Neuroengineering, Rapid Prototyping, Instrumentation, Data Analysis, Manufacturing Processes

PROJECTS

Pill Splitter - Make-A-Thon 2025   **Davis, CA**
Design Team Member   *Jan 2025*
- Designed a self-aligning pill splitter for patients with neuropathy and blindness
- Developed CAD models and manufactured functional prototype in under 48 hours
- Awarded **Most Creative Prototype** out of 15 teams for final presentation of model

Flow Chamber Redesign - Passerini Lab   **Davis, CA**
Co-lead Engineer   *Dec 2023 - Oct 2024*
- Revamped malfunctioning flow chamber for use in microfluidics experiments
- Modeled and manufactured prototypes using CAD Software and an SLA 3D Printer
- Implemented finalized devices, increasing accuracy in experimental microfluidic data

DNA Extraction Camera Mount - Exact Sciences   **Davis, CA**
Lead Engineer   *Jul 2024 - Sept 2024*
- Engineered custom camera mounts monitoring **1000+ cancer genomic assays** per day
- Utilized CAD Software to develop multiple prototypes incorporating client feedback
- Finalized design, proceeding to manufacture and install **12+** camera mounts in the lab

Service Workshop Inventory System - Exact Sciences   **Davis, CA**
Lead Engineer   *Jun 2024 - Sept 2024*
- Programmed a robust, customizable system to track quantities of **100+ machine parts**
- Rapidly learned and implemented VBA code for automatic inventory updates
- Integrated scan in/out system with barcode functionality for quick and simple usage

Microscope Manufacturing - BIM 107 @ UC Davis   **Davis, CA**
Lead Engineer   *Mar - Jul 2024*
- Created CAD models for each part given engineering drawings and specifications
- Machined **5+** parts using the drill press, manual/CNC mill, laser cutter, and lathe
- Assembled functional microscope with adjustable magnification to view biosamples

SKILLS

Software: Java, Python, Matlab, VBA, Solidworks, Circuit Design, OpenVibe, LabVIEW
Hardware: Arduino, Cell Culture, Sterile Technique, Rapid Prototyping, Machining, Microfluidics