

Please find here a list of all the projects in the SLI STEM Summer Internships for 2023.

1. **Protein 610 from *Mesoplasma florum* – expression, purification, and crystallization:** Biochemistry, Molecular Biology, Lab
2. **Immune receptor distribution and binding to immune cells in membrane systems derived from cancer cells:** Cancer Biology, Cancer Research, Fluorescence Microscopy
3. **Understanding the dynamics of harmful algal blooms through the lens of trait-based ecology:** Machine Learning, Ecology, Environmental Science, Applied Math
4. **Research & Development Intern @ Digbi Health:** Research, Gut Health
5. **Manufacturing Engineering Intern @ geCKo Materials:** Manufacturing Engineering, Materials Science, 3D Printing, Prototyping
6. **Improving Specimen Preparation for Atomic Scale Characterization:** Nano-tech, Fabrication, 3-D Printing
7. **Examination of equity in drinking water system consolidations:** Data Analysis, Data Science, Public Health, Equity, Mixed Methods Research
8. **Synthesis of Single Chain Nanoparticles as Enzyme Mimics:** Chemistry, Polymers
9. **Lung Tumor Segmentation in CT images:** Machine Learning, Cancer treatment, Biotech, Biomedical Data Science
10. **Clinical utility of dupilumab in eosinophilic esophagitis patients:** Medical Data Review, Data Analysis, Data Visualization
11. **Building a Smiley Service Bot with GPT:** Machine Learning, Natural Language Processing, Chatbot, GPT
12. **Mechanical Technician @ iSono Health:** Ultrasound Imaging, Women's Health
13. **Investigation for Protein Stabilizing Compounds in Liquid and Hydrogel Solutions at Intact Therapeutics:** Cancer Treatment, Cell Culture, Biotech
14. **Inducing Magnetism in a Topological Insulator by Interfacing with a Magnetic Insulator:** Microelectronics, Advanced Materials Synthesis, Quantum mechanics
15. **Process Associate @ EMD:** Semiconductor Industry, Chip Manufacturing, Process Engineering
16. **Electrical Engineer Intern in a Semiconductor R&D Fab @ EMD:** Electrical Engineer, Mechanical Engineer, Chemical Engineer, Systems Engineer
17. **Program Evaluation Assistant:** Program Evaluation, Program Design, Design Thinking, Data Science, Data Analysis, Data Visualization, Quality Analysis, Research
18. **Using machine learning to study next-generation, atomically thin materials:** Machine Learning, Quantum mechanics, Physics, Advanced Materials
19. **Molecular Biology Internship @ Standard BioTools (Project 1):** Biotechnology, Health, Genomics, Microfluidics
20. **Engineering Internship @ Standard BioTools (Project 2):** Biotechnology, Health, Genomics, Microfluidics
21. **RSL: Guided internship in biomedical imaging:** Radiology, Biomedical Imaging
22. **Optometric Technician - Learn the Job and Then Create a Training Manual to Teach Others:** Optometry, Clinic

- 23. Elucidating Structure and Properties in a New Class of Solvents:** Chemistry, Data Analysis
- 24. Making molecules dance with light:** Quantum Mechanics, Computational Chemistry
- 25. Developing virtual histology for early diagnosis of skin cancer:** Machine Learning, Medical Imaging, Diagnostics
- 26. How does strawberry agricultural intensity in California affect the function of microbial symbionts in the honeybee gut:** Biology, Microbiology, Computer Science, Data Science
- 27. Machine learning based tropical cyclone simulator:** Machine Learning, Environmental Science
- 28. Understanding natural selection by mapping genes to cells and tissues of the Drosophila body:** Evolutionary Biology, Genomics, Data Science
- 29. Electric Racing Car Dashboard Project Intern @ ECM:** Electric Cars, Linux, Android, C++, C, Artificial Intelligence (AI), Internet of Things (IoT), Machine Learning
- 30. Electric Vehicle Charging Project Intern @ ECM:** Electric Cars, Linux, Android, C++, C, Artificial Intelligence (AI), Internet of Things (IoT), Machine Learning
- 31. SLI Leadership Fellow for Summer Institute:** Student Empowerment, Summer Program, Teaching, Mentoring
- 32. 140 years of insect herbivory trends measured through preserved plant specimens:** Plant Biology, Image processing, data analysis, statistical analysis
- 33. The structure and resilience of ecological interaction networks in marine microbes:** Microbiology, Data Analytics, Data Visualization
- 34. Supporting a Prostate Cancer Treatment Planning Platform:** Cancer Treatments, Software Engineering
- 35. Supporting the 2023 FLi Sci Research Scholars Program:** Research, Underrepresented in STEM, Qualitative Research, Quantitative Research
- 36. Microprocessor Integrated Circuit design using 2-D GUI CAD tool:** Semiconductors, 2-D or 3-D design, Minecraft, Legos
- 37. Evaluation of invasive water hyacinth as a sustainable absorbent material for use in local manufacture of disposable menstrual pads in riverine communities:** Public Health, Sustainability, Women's Health
- 38. Resilience of photosynthesis in the Arctic:** Climate Change, Environmental Science, Arctic Ecosystems, Data Analysis
- 39. Software tools for particle accelerators:** Particle Acceleration, Electricity & Magnetism
- 40. Responses of wetlands methane emissions to warming:** Global Warming, Wetlands, Ecology, Environmental Science
- 41. Machine Learning. Mixture of Experts (MoE) Models Intern:** Machine Learning, AI, Simulation, Big Data, AWS