LALITH ROOPESH

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Passionate pre-medicine student looking to continue bioinformatic and biochemical research. Has ample experience in previous research at the university and corporate level along with being able to use the tools necessary, and has leadership and teamwork skills.

RESEARCH EXPERIENCE

Research Organizer - MCPyV Host Interactions, Engineering Biology Core, October 2022 - Present

> Working on characterizing protein interactions with the Merkel cell polyomavirus and how that leads to development of Merkel cell carcinoma.

Research Organizer - Neurotransmitter Modeling, Engineering Biology Core, October 2022 - Present

> Homology modeling of vasopressin, oxytocin, dopamine 1, and dopamine 2 receptors across 76 species and testing with standardized ligands to improve drug design.

Bioinformatics Research Assistant, Eli Lilly & Company, June 2021 - July 2021

> Worked on genome sequencing and error analysis as part of a paid internship through Indianapolis Project STEM. While the specific project was confidential, presented on techniques and skills learned as part of the program.

Data Analysis Assistant, Regenstrief Institute, June 2020 - July 2020

> Analyzed factors leading to ICU admittance of Indiana COVID-19 patients using INPC data. Presented a thorough analysis of factors that may intensify COVID-19 and recommendations for further research.

Research Project Manager, Health & Science Innovations, June 2019 - July 2019

> Lead project that designed air filters to minimize risk of neurological damage from chemicals. Presented solutions to several experts in the field, including staff at Cummins Engineering, Eli Lilly & Company, and faculty at Indiana University and Purdue University.

LEADERSHIP & LOGISTICAL EXPERIENCE

Founder and President, Bulls Science Olympiad, August 2022 - Present

Oversees hosting a Science Olympiad tournament for over 800 middle-school or high-school students across dozens of schools.

Vice President, Engineering Biology Core, January 2023 - Present

Oversees event planning and marketing for one of USF's largest student-run research organizations. Started two research projects, one of which as project leader.

Peer Mentor Lead, Judy Genshaft Honors College, November 2022 - Present

Plans, creates curricula, trains teachers, and executes IDH 2930 Honors Foundations, a required class for all freshmen in the Judy Genshaft Honors College.

Co-founder and Treasurer, Settle Out USF, September 2021 - January 2023

Handles funding and attendance for Settle Out USF, a club founded to help international students become accustomed to Florida.

Honors Peer Mentor, Judy Genshaft Honors College, June 2022 - October 2022

Teached a section of IDH 2930 Honors Foundations, a required class for all freshmen in the Judy Genshaft Honors College. Helps plan curriculum as well.

Events Committee Member, Honors College Student Council, September 2022 - Present

Plans and volunteers at events and general activities with the Judy Genshaft Honors College student council.

Event Supervisor for Science Olympiad, UC Davis, UT Austin, MIT, UC Berkeley, Stanford, UPenn, Caltech, August 2021 - Present

Writes college-level exams and supervises competition across numerous disciples for high-profile competitions across the country.

Mayor, Juniper Hall Council, September 2021 - May 2022

Organized and executed activities and decorations for Juniper Hall at USF. Worked closely with Resident Assistants and the Residence Life Coordinator.

Captain (2020) and President (2021), Carmel HS Science Olympiad, September 2017 - May 2021

Competed for and ran a completely student-run team through two competition seasons, winning the State Tournament for four years consecutively and raising our National placement by 15.

Co-founder and Operations Head, Indiana HS Science Championships, May 2020 - August 2020

Co-founded and became in charge of tournament logistics for one of the first large-scale online science competitions after COVID-19 canceled most in-person opportunities. Had over 130 competitors from schools across the Midwest.

Instructor, Grandmaster Lee's Taekwondo, January 2018 - March 2020

Worked as an instructor for all belt levels, gaining experience working with all ages of people.

Instructor, First Start Computer Science Education, August 2017 - July 2019

Wrote curricula for and taught kids ranging from K-12. Taught Python and hardware courses, specifically using the Raspberry Pi.

EDUCATION

Carmel High School, Carmel, IN
Academic Honors Diploma
GPA: 4.5
Graduated May 2021

University of South Florida, Tampa, FL
B.S. Biomedical Sciences
Minors in Psychology and Biomedical Physics
Judy Genshaft Honors College
GPA: 3.98
Expected graduation: May 2025

SKILLS & TRAINING

Data analysis and general experience in Python & R

Familiar with PyMol, Autodock Vina, Autofold, and similar protein modeling/docking software

CITI Program Training through the University of South Florida:

Social and Behavioral Responsible Conduct of Research
Physical Science Responsible Conduct of Research
Biomedical Responsible Conduct of Research

CITI Program Training through Indiana University Health:

Social/Behavioral Researchers
Social and Behavioral Responsible Conduct of Research
Physical Science Responsible Conduct of Research
IUEHS Bloodborne Pathogen Training
IUEHS Biosafety Training
Good Laboratory Practice (GLP)
Biomedical Responsible Conduct of Research
Biomedical Researcher

Environmental Health & Safety Training through the University of South Florida

- Lab Safety
- Hazardous Waste Awareness and Handling

Lab Techniques Training through the University of South Florida:

CHM 2045L & 2046L	General Chemistry I & II Lab
CHM 2210L	Organic Chemistry I Lab
PCB 3063L	Genetics Lab
PCB 3023L	Cell Biology Lab

CITI Program Training through Regenstrief Institute

- Researchers (Conflict of Interest)
- Researchers (Responsible Conduct of Research)

Experienced in website building in HTML5, CSS, and JavaScript

Research and Statistics Fundamentals

Microsoft Office Specialist Expert Certification (2018)

Leadership and Teamwork