

Seattle, Washington | Phone: (425) 204-8600 | Email: rohanmuppa123@gmail.com

Education	Skyline High School International Baccalaureate (IB) Student	Sammamish, WA 2020 – 2024
Experience	StoreCash <i>Intern</i>	2022 - 2023
	<ul style="list-style-type: none">• Interned at StoreCash, a FinTech startup for cash back, digital banking, and gift cards.• Built and deployed Python-based AWS lambda functions for backend data processing, authentication, and notifications.• Leveraged machine learning for natural language processing, sentiment analysis, and recommendation systems to improve the StoreCash app user experience and engagement.• Worked in a cross-functional team to deliver high-quality features and improvements to the StoreCash app.	
	NASA Applied Remote Sensing Training (ARSET) <i>Student</i>	2023 - Present
	<ul style="list-style-type: none">• Attained comprehensive proficiency in remote sensing applications for ecological and environmental evaluation• Identified and tracked aquatic vegetation and harmful algal blooms with remote sensing methodologies• Implemented machine learning techniques to remote sensing data for water quality examination• Utilized satellite databases to retrieve information on nutrient concentration• Learned significant on the ins and outs of remote sensing with successful practical implementation	
	Machine Learning Analysis of Satellite Images (Ongoing) <i>Student Researcher</i>	2022 - Present
	<ul style="list-style-type: none">• Examined the use of machine learning algorithms to monitor water quality parameters (WQPs) in non-optically active waters to find Nitrogen and Phosphorous concentrations• Understood how remote sensing data from Sentinel 2, and airborne systems to is used to predict nitrogen concentrations• Identified how remote sensing data extracts features such as water surface temperature, normalized difference vegetation index, and band reflectance values.• Analyzed the importance of different input variables in predicting nitrogen concentrations using RFR and found that water surface temperature was the most important variable• Completing under the guidance of a mentor	
	Environmental Computing Research <i>Independent Researcher</i>	2021 - 2022
	<ul style="list-style-type: none">• Identified that chip manufacturing accounts for most of the carbon output attributable to hardware systems• Evaluated that Life-cycle analyses (LCAs) are important for understanding the carbon footprint of hardware systems• Outlined that capex emissions are more prevalent than opex emissions for modern mobile and data-center equipment• Determined that always-connected products like desktops and personal assistants have more Opex-related energy consumption• Evaluated that designing sustainable data centers should consider renewable energy, efficiency increases, and leaner hardware• Summarized that co-optimization for different metrics, such as tail-latency, throughput, power, and infrastructure-related carbon emissions, can reduce the environmental impact of computing systems	
	Mathnasium <i>Math Instructor</i>	2021 – 2022
	<ul style="list-style-type: none">• Tutored students ranging from 1st to 12th grade in various math subjects such as Algebra, Geometry, and Pre-Calculus.• Assessed students' current math skills and developed customized learning plans to help them improve.• Monitored student progress and provided regular feedback to parents and students.• Assisted a struggling student in overcoming academic challenges to achieve a B+ grade (was failing prior) by the end of the term	
Community Work	Iskcon Vedic Cultural Center <i>Volunteer</i>	2018 – Present
	<ul style="list-style-type: none">• Provided weekly assistance• Facilitated food distribution, box preparation, temple sanitation, and other temple responsibilities• Established a personal rapport with the temple staff• Collaborated with new volunteers and provided guidance	
	Sustainable Water Solutions <i>Founder</i>	2022 – Present
	<ul style="list-style-type: none">• Organized field trips to various locations such as water treatment facilities• Custodian was advisor who inspired compassion and new perspectives as usually custodians are overlooked• Informed students on scientific topics related to water conservation (i.e., plasma science technologies, remote sensing data)	

- Examined water quality at school using pH strips and pinpointed weak points

Projects	IB Computer Science SL IA	2022
	<ul style="list-style-type: none"> • Created a mobile app called “GreenGarden” for my mother, who is passionate about both gardening and environmentalism, that enabled her to design a new garden • Inputted data about one’s current garden and formulated a new garden that is more sustainable based on the specifics of your garden and budget • Recommended a list of plants based on factors such as biodiversity, plant compatibility, water needs, etc. • Generated a report on its environmental benefits • Produced a schedule for garden maintenance 	
	Finance Project	2021
	<ul style="list-style-type: none"> • Customized and enhanced version of the capstone project of Harvard CS50 • Extensive stock trading platform 	
Related Coursework	Algorithmic Trading Script	2021
	<ul style="list-style-type: none"> • A program that automatically traded cryptocurrencies 	
	IB Math Pre-HL (Precalculus) IB Math HL 1 (Calculus 1) IB Business Management SL (Business Administration and Accounting) IB Physics HL 1 (College Physics 1) IB Computer Science SL (Advanced Computer Science fundamentals) IB Psychology SL (College Psychology/Social Sciences) Honors World History 10 (World History/Language) Honors Literary Analysis and Composition 10 (World History/Language) IB Business Management SL (Score Pending) IB Psychology SL (Score Pending) Harvard CS50 (Computer Science fundamentals) Vanderbilt Computing and the Environment (Environmental Science w/ Computers) Purdue Groundwater Contamination (Water pollution) University of Alaska Synthetic Aperture Radar: Foundations (Remote sensing Risk Detection) University of Alaska Synthetic Aperture Radar: Hazards (Remote sensing Risk Detection) University of Alaska Synthetic Aperture Radar: Ecosystems (Remote sensing Risk Detection)	
Extracurricular Activities	Sustainable Water Solutions Club , Founder and President	2021 – Present
	Sustainability Club , Treasurer	2022 – Present
	Sustainability Ambassadors City Ambassador	2022 – Present
	Sammamish Youth Environmentalists Vice President	2021 – Present
	Seattle Marine Science Club Member	2021 – Present
	FIRST Robotics Competition Club	2021 – Present
	Track and Field , Varsity Athlete	2020 – Present
	Wrestling , Varsity Athlete	2019 – Present
Awards	Mathematics Excellence Award (Gold)	2023
	National Honor Society Scholar	2022
Field Skills:	Machine Learning Frameworks, Remote Sensing Software, Remote Sensing Techniques, Image Processing Techniques, Machine Learning Techniques, Data Science Techniques, Cloud Computing Platforms, Environmental Science Concepts, Water Science Concepts,	
Language Skills:	Native in English, Native in Telugu, Elementary in Kannada, Elementary in Spanish	
Computer Skills:	Python, Java, HTML, Javascript, Adobe Photoshop, Adobe After Effects, Java, HTML, Microsoft Office (Word, Excel, PowerPoint, Teams), TensorFlow, Scikit-learn, Pandas, Numpy, Matplotlib, OpenCV, Remote Sensing, Image Processing, AWS Lambda, Azure, Google Cloud Platform, Docker, Git, Linux.	