Ashish Jayamohan

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Education:

- B.S. Computer Science, UC San Diego (Graduating June 2025)

Experience:

Software Engineering Intern, Surface Optics (June 2023 - September 2023)
- Optimized SOC-210 bidirectional reflectometer for full bidirectional reflectance distribution function (BRDF) calculation
- Added support for Zemax scatter and transmission (BSDF and BTDF) formats
- Skills: C++, Advanced Photonics/Physics, OpticStudio

Undergraduate Researcher, Boolean Lab - UCSD (April 2023 - Present)
- Developed efficient tool for quantitative organoid detection and analysis
- Working on developing low-cost tinyML-enabled device to effectively diagnose specific diseases from cytometric data
- Skills: Keras, Python, Java

Software Engineer, VIE Healthcare (February 2021 - Present)
- Developed an optical character recognition system to intelligently scan medical invoices
- Skills: Keras RetinaNet, Python, Visual Basic, C++

Undergraduate Researcher, Yonder Dynamics (September 2022 - Present)
- Designed and implemented a compact Raman spectrometry system for scientific analysis with a total cost of under $1000
- Skills: Python, C, Matlab

Research Assistant, UCSF CHORI (August 2020 - April 2023)
- Studied long-term effects of statin strains on individual patients using genomic analysis
- Contributed to open-source genomic analysis projects and developed a novel tool for fast phenotypic predictions
- Skills: Python, Java, R

Publications:

- 2021 – Implementation and Assessment of Teamwork in Computer Science Education - Jayamohan, Cheuoua (https://makecscount.com/Jayamohan2021.pdf)
- 2023 - Wet Lab Fluorescence Spectroscopy for Detection of Life in Martian Soil - Patil, Johnson, Jayamohan, O' Malley, Muruhuthasan (https://ashishjayamohan.github.io/files/general/poster.pdf)

Coursework:

- Design & Analysis of Algorithms
- Database System Principles
- Software Engineering
- Theory of Computation
- Systems Programming
- Mathematical Algorithms Analysis
- Advanced Data Structures
- Basic Data Structures & Object-Oriented Design
- Introduction to Bioinformatics