

AARAV PABLA

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Last updated: August 6, 2026

EDUCATION

University of California, Los Angeles (UCLA)

Bachelor of Science, Computer Science

Bachelor of Science, Physics

Intercampus Visitor, University of California, Berkeley

August 2025 - June 2027

Overall GPA: 3.939/4.0

Fall 2026

University of Maryland, College Park

Bachelor of Science, Computer Science

Minor: Quantum Science and Engineering

Honors College - Advanced Cybersecurity Experience for Students (ACES)

May 2024 - August 2025 (Unfinished)

Overall GPA: 3.959/4.0

Montgomery College

Associate of Arts, Computer Science & Technologies

Associate of Science, Physics

September 2022 - August 2024

Overall GPA: 4.0/4.0

PUBLICATIONS

1. Aarav Pabla, Yu-Xin Wang, and Yifan Hong. *Spatial overhead reduction for 2D hypergraph product codes*. 2026. arXiv: 2605.11318 [quant-ph]. URL: <https://arxiv.org/abs/2605.11318>
2. Quan Do et al. *A Survey of Quantum Programming Languages*. 2026. arXiv: 2606.26254 [quant-ph]. URL: <https://arxiv.org/abs/2606.26254>

TECHNICAL

Computer Languages

Strong: Java, OCaml, Python;

Proficient: C, C++, Rust;

Basic: JavaScript, HTML, CSS

Other

Qiskit, QuTiP, Stim, BP+OSD, Git, LaTeX, Unix

FELLOWSHIPS

- [FORTHCOMING] Fall 2026 - Spring 2027: UCLA Physics and Astronomy Honors Society Fellow
 - PI: Jason Petta
 - Project: Semiconductor spin qubit / quantum dot device experiments
- Summer 2026: Institute for Robust Quantum Simulation (RQS-UR)
 - PIs: Mohammad Hafezi, Hassan Alnatah
 - Project: Phase-Controlled Photocurrent Oscillations in Quantum Hall Edge States
- Summer 2025: Combinators, Algorithms, and AI for Real Problems (REU-CAAR)
 - PIs: Yifan Hong, Yuxin Wang
 - Project: *Spatial overhead reduction for 2D hypergraph product codes*
 - Preprint: arXiv:2605.11318

- Spring 2025: MathQuantum Fellow
 - Project: *Machine learning techniques to solve partial differential equations governing open quantum systems*

AWARDS

- Ann Tsu-Ann Tai and Kam Sing Tso Centennial Undergraduate Scholarship in Computer Science (+ Matching Fund) and Muriel K. and Robert B. Allan Fund
- Rales O'Neill Scholarship
- Phi Kappa Phi Honor Society
- Eta Kappa Nu electrical and computer engineering, Tau Beta Pi engineering, Upsilon Pi Epsilon computer science honor society eligibility

TALKS AND PRESENTATIONS

- August 2025: Presentation at the University of Maryland Summer Undergraduate Research Conference (SURC) (poster)
- March 2026: Talk at APS Global Physics Summit March Meeting
- April 2026: Presentation at the MathQuantum annual symposium (talk)
- August 2026: Presentation at the RQS-UR end-of-program symposium

PROJECTS

- Regular Expression Practice Problems
- You Zhou lab — Built a web interface to query/sort experimental 2d material datasets

VOLUNTEERING

- Do Quantum — Director of Quantum Learning
- Association of Computing Machinery (ACM) – Quantum
- Quantum Computing Student Association at UCLA
- Undergraduate Quantum Association at UMD
- Quantum Computing Club at Montgomery College

TEACHING

- Spring 2025 Teaching Assistant, CMSC 330 at UMD (Organization of Programming Languages)
- Winter 2026 Learning Assistant, COM SCI 32 at UCLA (Data Structures & Algorithms in C++)
- Winter 2026 Reader, Physics 1BH (Honors) at UCLA (Oscillations, Waves, Electric and Magnetic Fields,)

RELEVANT COURSES

*Graduate course

Math

Calculus I, II, III

Ordinary Differential Equations

Linear Algebra

Partial Differential Equations

Complex Analysis

Physics

Classical Mechanics

Electrostatics and Magnetostatics

Modern Physics

Quantum Mechanics I, II, III

Quantum Information*

Computer Science

Quantum Computing

Quantum Algorithms*

Data Structures & Algorithms

Algorithms

Automata Theory

Computer Vision

Formal Languages and Automata Theory

Other

Foundations of Cybersecurity

Electrical Engineering

Statistics & Probability Theory

Lagrangian, Hamiltonian Mechanics

Waves, Optics

Thermal Physics

Quantum Computation*

Quantum Programming*

Object-Oriented Programming

Computer Systems

Programming Language Design

Design and Analysis of Algorithms

Software Construction

Logical Analysis and Design of Digital Systems

Applied Cybersecurity

General Chemistry