

# Arav Raghunathan

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## EDUCATION

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### Georgia Institute of Technology

*Bachelor of Science in Electrical Engineering, Minor in Computing & Intelligence*

Atlanta, GA

*Expected in May 2028*

## EXPERIENCE

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### Undergraduate Research Assistant

January 2026 – Present

*ICE Lab @ Georgia Tech*

*Atlanta, GA*

- Designed and developed **Field-Programmable Analog Arrays (FPAAs)** in SkyWater's 130 nm CMOS process for Vector Matrix Multiplication (VMM) applications.
- Simulated analog circuits in Xschem and created corresponding layouts in Magic, translating designs from concept to physical implementation..
- Verified design integrity using **LVS**, ensuring alignment between schematic and fabricated layout.

### Peer Instructor

January 2026 – Present

*The Hive Makerspace*

*Atlanta, GA*

- Advised **1,000+** students in hands-on technical skills, including breadboarding and PCB fabrication.
- Developed expertise in Bambu and Resin 3D printers, circuit analysis, and laser cutting techniques.
- Mentored students and promoted STEM education through projects and resources that foster creativity and technical confidence.

### ASIC Physical Design Engineer

January 2026 - Present

*SiliconJackets*

*Atlanta, GA*

- Designed and implemented a **32-bit RTL calculator**, including a custom datapath architecture and SRAM-based result storage.
- Supported **ASIC tapeout workflows** as part of the Physical Design team, collaborating on processes to meet project deadlines.
- Developed advanced proficiency in **SystemVerilog**, Cadence Virtuoso, and Innovus Stylus, applying these tools to complex digital design and physical implementation tasks.

### Software Development Intern

August 2024 - May 2025

*Oracle Corporation*

*Suwanee, GA*

- Executed collaborative software development projects utilizing **Oracle APEX** and other programming languages.
- Synthesized research papers and presented software concepts, including cloud computing.
- Managed project-based tasks for 15 juniors and seniors, ensuring organization and clarity.

### Course Instructor

June 2024 - June 2025

*iCode Alpharetta*

*Alpharetta, GA*

- Delivered hands-on STEM lessons in robotics, programming, and engineering concepts.
- Accumulated **100+** hours of teaching experience in classroom and extracurricular settings.
- Designed interactive projects to foster creativity, teamwork, and problem-solving skills.

## PROJECTS

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### MindGuard | *Python, SQLite, KivyMD, OOP*

- Engineered an app to enhance psychological wellness and optimize task management.
- Leveraged Python OOP and SQLite integration to formulate efficient framework.

### Number Converter | *Python, KivyMD, OOP*

- Designed an app for inter-system numeric conversion involving the binary, octal, decimal, and hexadecimal number representations.
- Developed expertise in the KivyMD API and Python modularity for effective implementation.

## TECHNICAL SKILLS

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**Programming Languages:** Java, Python, MATLAB, C, RISC-V, SQL, PL-SQL, SystemVerilog

**Hardware Design & Embedded Systems:** Xschem, Magic, LVS (Layout Versus Schematic), Breadboarding, Waveform Analysis, Embedded Systems, FGPA / FPAA Design, Signal Processing

**Tools & Softwares:** PTC Onshape, Oracle Application Express