

# Shubham Saluja Kumar Agarwal

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## EDUCATION

### Purdue University West Lafayette, IN

May 2026

*Bachelor of Science in Computer Engineering, Minor in Math*

Current GPA: 4.0/4.0

*Certificate in Entrepreneurship (Anticipated 2026)*

## WORK EXPERIENCE

### Wireless Sensing Circuits and Systems Laboratory

April 2023 – Present

*Research Assistant – Purdue University, West Lafayette, IN*

- Aiding the completion of research on non-invasive health analysis of rechargeable batteries.
- Collecting, organizing, and sorting data on battery impedance, verifying device and sensor functionality, and soldering circuits with the purpose of delivering them to Ford Motor Company.

### Bechtel Innovation and Design Center

November 2022 - Present

*Peer Mentor — Purdue University, West Lafayette, IN*

- Assisting Bechtel Center members in completing their class, club, or personal projects within the scope of electronics from the design consultation stage all the way up to the manufacturing stage.
- Developing firmware, designing, prototyping, debugging circuits, and conducting surface mount and through-hole soldering.
- Fixing and utilizing lab equipment such as a PCB mill, and an array package rework system
- Organizing and executing workshops to expose those enrolled to fundamentals of electronics.

### Universidad Autónoma del Estado de Morelos (UAEM)

July 2021 - September 2021

*High School Research Intern — Nanomaterials Lab, UAEM, Morelos, MX*

- Designed, troubleshot, and built a high voltage power source with a variable output voltage between 15kV and 30kV from recycled parts which was adapted to an electrospinning device, also manufactured from spare parts.
- Verified the applicability of the results using a Scanning Electron Microscope, and image analysis software such as ImageJ.

## PUBLICATIONS AND PRESENTATIONS

- **S S Kumar Agarwal**, B U Mendoza Enríquez, and D Hernández Rivera, *Device fabrication from recycled electronic spare parts: dip coating device and high voltage power source adapted for electrospinning device*
  - Best presenter at the 2022 11<sup>TH</sup> International Conference on Information and Electronics Engineering

## CAMPUS INVOLVEMENT

### Institute of Electrical and Electronics Engineers (IEEE) Club

October 2022 - Present

*Vice-Infrastructure Lead — Purdue University, West Lafayette, IN*

- Redesigning the club website from scratch, using HTML, CSS, JavaScript, and ReactJS.
- Managing the servers and e-mail correspondence of the club and members.

*Sponsorship Lead for Computer Society – Purdue University, West Lafayette, IN*

- Acquire sponsorship, and apply for grants for the completion of projects, events and workshops within the club.

### Autonomous Robotics Club Purdue

January 2023 - Present

*Wizard's Chess Team Member — Purdue University, West Lafayette, IN*

- Aided in the creation of large voice-controlled chess pieces, by assembling the bases and completing the circuit.
- Troubleshot the produced circuits, fixing details, and making sure the connections across components were correct.
- Created camera mounts in Fusion 360 for future utilization in the assessment process of the chess board.

### Purdue Hackers Club

April 2023 – Present

*Member — Purdue University, West Lafayette, IN*

- 17<sup>th</sup> place in Division II of the Purdue HammerWars coding competition with over 60 participants from majors like CS and Computer Engineering.
- Creating innovative codes, such as a Tower of Hanoi solver and Conway's Game of Life, at the weekly meetings.

## SKILLS AND ACHIEVEMENTS

- Software: Microsoft Office, Python, Autodesk Fusion 360, Onshape, MATLAB, C89, HTML, CSS, Autodesk Eagle, KiCad, JavaScript, Kotlin, Android Studio, Arduino
- Languages: English (native), Spanish (native), Hindi (conversational), French (basic)
- Physics Olympiad: Central America and Caribbean (Gold), Iberoamerican Physics Olympiad (Silver), Mexican Physics Olympiad (Silver)