Krishiv Aggarwal
krishiva@gatech.edu, LinkedIn profile, 408-329-8045

Education

Georgia Tech GPA 4.0/4.0 **Expected Grad. May 2027**
Bachelors in Electrical and Computer Engineering

- Relevant coursework: Design of Digital Systems, Object Oriented Programming (Java), Computing for Engineers (Matlab)
- Planned coursework (Spring): Introduction to Signal Processing, Programming for Hardware/Software Systems, Digital Design Laboratory, Circuit Analysis
- Clubs and organizations: Student Gov. Representative, GT Badminton Club, GT DnD Club

Research and Publications

- **Pharmacophore-Guided Drug Discovery:** Developed a machine-learning platform for drug discovery.
- **Robotic Arm Integration:** Integrated a UR5 robotic arm with a 2F-85 gripper, achieving tactile feedback. Aimed for 100% accuracy in object identification and handling.
- **ADMET Properties & Antibiotics:** Analyzed ADMET properties for antibiotic classes using machine learning. Derived insights on drug efficacy and pharmacokinetics.
- **Automating TLC for Reaction Analysis:** Automated reaction analysis using TLC and image analysis. Employed CNNs for accurate reaction progress prediction and developed robotic arms to run TLCs.
- **Machine Learning & Crime Data:** Utilized machine learning to analyze crime data, identifying factors correlating with crime rates. Found neural networks to be the most effective prediction model.
- **DNA Binding Protein Classification:** Proposed a classification method for DNA binding proteins based on geometric and structural analysis, enhancing understanding of protein structures.

Projects and Experience

CubeSat (Nanosatellite) May 2022 - Present

- Interned with **Stanford Student Space Initiative (SSI)** and featured in their documentary.
- Invited to attend the annual CubeSat conference at Cal Poly San Luis Obispo and collaborated with Cal Poly Pomona Bronco Space on various projects.
- Custom-designed through KiCad and built essential CubeSat components, including a Yagi antenna, solar boards, flight controller boards, and radio modules.
- Innovative cost-saving measures: built a custom Pick and Place machine, converted a toaster oven for PCB assembly, and aimed to reduce CubeSat production costs to under $2,000.
- Raised $55K from Apple, Toyota, and different local fundraising efforts for launch and parts.
- **Launch planned in Nov** on Falcon 9 mission

STEM Made Fun - Founder May 2019 - Present
A U.S.-based non-profit initiative championing STEM engagement for minority and underserved communities. Our mission: bridge the STEM opportunity gap and inspire future careers.

- Authored **"Science & Beyond: Physics Edition,"** a children's science textbook with instructional videos. Ranked #1 in children's physics books and top 5 in study guides. **Featured on TV-9**

FIRST Robotics - Build lead 2016-2022

- Lead other high school students to design and build a robot capable of completing various physical challenges at competition, winning multiple awards for robot design.

Awards: Eagle Scout, Presidential Service Award Gold, National AP Scholar, Gold Award for Educational Excellence
Technical Skills: Java, Python, C, Matlab, Adobe Illustrator, Fusion 360, Autodesk Inventor, 3D Modeling and Printing (SLS, SLA, FDM)