Castiel Li

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EDUCATION

Cornell University, College of Engineering, Ithaca, NY **GPA: 3.57**
Bachelor of Science, Mechanical Engineering **Expected Dec 2027**
Relevant Courses: Statics and Mechanics of Solids, Thermodynamics, Dynamics, Mechanical Synthesis, Introductory Fluid Dynamics, Mechanics of Engineering Materials, Computer-Aided Manufacture, Heat Transfer

TECHNICAL EXPERIENCE

Combat Robotics @ Cornell, Cornell University, *Kinetic Subteam Member* **Oct 2024 – Present**

- Collaborated with 8 other engineers to design, manufacture, test, and iterate a combat robot with a high kinetic energy weapon to compete in the 12lb division of the National Havoc Robotic League competition
- Utilized Fusion 360 to develop and model components in the chassis, drivetrain, and weapon of 2 different robots
- Operated manual mills and manual lathes to fabricate custom aluminum components for 3 weapon systems
- Prototyped chassis attachments using 3D printing and manual machining, increasing structural integrity by 67%
- Designed circuit diagrams and supervised the production, testing, and troubleshooting of the electronic components for 2 different robots to ensure functioning drivetrain and weapon, achieving a 100% success rate

Organic Robotics Laboratory, Cornell University, *Undergraduate Research Assistant* **May – Aug 2025**

- Contributed to the testing and development of an underwater octopus robot to further research into soft robotics
- Utilized Fusion 360 to ideate and model a 6’x4’x2’ underwater structure to test the mobility of the robot
- Operated laser cutters, power tools, and hand tools to prototype, manufacture, and assemble 40+ components
- Soldered circuit boards and manufactured custom waterproof circuit boxes, reducing circuit shortage by 88%
- Used Arduino IDE to program receivers for underwater load cells, obtaining a 98% accuracy in measuring force

LEADERSHIP EXPERIENCE

Test Box, Combat Robotics @ Cornell, *Project Lead* **Aug 2025 – Present**

- Consulted the National Havoc Robotic League and other combat robotics teams to research safe robot testing
- Conferred with Engineering Learning Lab Safety and Operations Supervisor to negotiate a permanent testing area
- Directed the renovation of the current testing configuration using member feedback, eliminating 5+ design flaws
- Guided the development of 20+ new components and assemblies in Fusion 360 and compiled a bill of materials
- Supervised the preparation of materials for welding with 10+ engineers using saws, sanders, and grinders

No Banana! (Band), Cornell University, *Founder/Leader/Lead Vocalist* **Aug 2024 – Present**

- Founded a 10 member student band and used social media outreach to recruit musicians across 5 instruments
- Scheduled and facilitated weekly 3 hour rehearsals to develop and refine setlists for campus performances
- Negotiated and secured performances at 3 separate campus fraternities, generating $800+ in revenue

National Honor Society, Union County Magnet High School, *President* **Sept 2023 – June 2024**

- Organized monthly meetings with 50+ members to discuss fundraising events and volunteering opportunities
- Coordinated with the Vice President to schedule 100+ peer tutoring sessions between students across 20+ subjects
- Partnered with the American Red Cross to host a blood drive, recruiting 40+ participants and 20+ volunteers
- Worked with the Treasurer to arrange fundraisers, generating and managing $1000+ in organization funds

Taekwondo Demonstration Team, Berkeley Heights Talium, *Captain* **Sept 2021 – June 2024**

- Facilitated weekly sessions with 30+ team members with ages ranging from 4 to 22 to practice demonstrations
- Collaborated with 2 other members to create 8 different choreographies for 20+ performances and competitions

PROJECTS

Brickbot, Cornell University **Jan – May 2025**

- Worked with 4 other Combat Robotics @ Cornell engineers to design and produce a 12lb combat robot with 10+ removable attachments for drive practice and marketing at school events, attracting 20+ applicants for the team

SPECIALIZED SKILLS

Software: Autodesk Fusion 360, Autodesk AutoCAD, MATLAB, Arduino IDE, Python
Manufacturing: CNC Machine, Manual Mill, Manual Lathe, MIG Welding, Drill Press, Chop Saw, Belt Sander, Metal Bender, Angle Grinder, Dremel, 3D Printer, Laser Cutter, Soldering
Languages: English (fluent), Mandarin Chinese (fluent)