

Keertik Bacon

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Objective

Driven and self-motivated mechanical engineering student with experience in product development and manufacturing, with strong interpersonal, communication, and leadership skills. Versatile and adept at collaborating with multi-disciplinary teams, working in high-paced environments, and problem solving. Looking for an engineering internship starting Summer 2022.

Education

Georgia Institute of Technology | Atlanta, GA

Bachelor of Science in Mechanical Engineering, GPA 3.85

Minor in Aerospace Engineering

August 2020 – Present

Expected Graduation, May 2024

Skills

Computer-Aided Design: SolidWorks, Autodesk Inventor, Inventor CAM, Inventor FEA, Autodesk CFD

Manufacturing: 3D printer, laser cutter, CNC mill, metal and wood shop tools

Electronics: Arduino UNO, NI Multisim, digital circuit design, breadboarding

Programming: Java, Python, C++, MATLAB, HTML, CSS

Certifications: Certified SolidWorks Professional – Mechanical Design (CSWP)

Other Software: Cura, 3DPrinterOS, GrabCAD, Microsoft Office, Inkscape, GitHub, Blender

Communication: Presentations (large and small audiences), written communications, engineering documentation

Languages: English (native), French (conversational), Tamil (conversational)

Experience

Johns Hopkins University Applied Physics Laboratory | Laurel, MD

June – August 2019

ASPIRE Intern

- Developed 4-stage pipeline that recorded video from a webcam and generated a sentence description of the video, adding functionality to a computer vision system that previously could only identify objects but not describe them
- Optimized the video captioning process, dropping the processing time for a 9 second video clip from 19 seconds to 10 seconds, almost achieving real-time processing

Relevant Coursework

Computer-Integrated Manufacturing: CNC manufacturing; manufacturing robot programming

Engineering Graphics: Concept sketches; computer-aided design; engineering drawings

Dynamics of Rigid Bodies: Kinematics and kinetics of particles and rigid bodies in one, two, and three dimensions; Newton-Euler equations; work-energy and impulse-momentum principles

Creative Decisions and Design: Product development (research, design, testing); manufacturing; mechatronics and robotics design; design reviews; group project work

Activities

RoboJackets | Atlanta, GA

September 2020 – Present

Shop Manager (December 2021 – Present)

- Embarked on machine shop modernization initiative by replacing old and dwindling tool supplies, and in the process of designing new shop layout and sheet stock storage, to improve space efficiency
- Manage \$1000 shop tooling budget and submit periodical bill requests for funding, to ensure that all five RoboJackets teams have access to the tools they need to work and meet competition deadlines

RoboRacing Mechanical Engineer (September 2020 – Present)

- Designed mounting hardware and waterproof casing for an autonomous go-kart braking system, helping the go-kart win 2nd place at the 2021 evGrand Prix Autonomous competition
- Led a team of two new members in redesigning the go-kart braking system for the 2022 competition, enabling more precise control over the brakes and reducing motor strain

Mechanical Training Lead (May – December 2021)

- Planned and directed a training program teaching design and manufacturing for 60 new members joining RoboJackets in Fall 2021 (including updating training material to be more intuitive and streamlined, recruiting and managing a team of trainers, and coordinating logistics), resulting in a 47% increase in training session attendance from Fall 2020