

Robert Kimball

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Education

Northeastern University, Boston, MA

May 2027

B.S. in Mechanical Engineering

GPA: 3.88/4.0 | Dean's List | Tau Beta Pi | Pi Tau Sigma

Relevant Courses: Mechanical Engineering Design, Computation & Design (FEA), Thermal Systems Design, System Analysis & Control, Measurement & Analysis

Skills

CAD & Analysis: SolidWorks (CSWA), Abaqus (FEA), MATLAB, Bentley OpenBuildings, Siemens NX (Coursera)

Manufacturing & Test: DFM/DFMA, Molding Defect & Tooling Review, Root Cause Analysis, 3D Printing, Lab Instrumentation

Programming & Automation: Python, Arduino C++, VBA, Excel, Power Apps/Automate/Query, SharePoint, Claude

Experience

Project Engineer Co-op (Fashion, Preschool, Disney) | **Hasbro**, Pawtucket, RI

Jun 2026 – Present

- Own engineering for 10 My Little Pony items (~100k units each); write the feasibility specs that launch them with overseas teams and present each at all 3 stage gates
- Review ~50 injection-molded figure samples a month for accuracy, function, and molding defects (short shots, flash, sink, gate and burn marks); assess overseas tooling feedback such as sharp tools and undercuts
- Suggested a DFMA change for a new collectible: a thick ABS base frame for the common tier and stacked PVC layers for higher tiers, so every tier lines up the same way and assembles only one way
- Review supplier quotes and push back on rates over target cost; automate daily sample-review agendas and quote filing with Claude

Project Engineer Co-op (Games, Play-Doh, NERF) | **Hasbro**, Pawtucket, RI

Jun 2025 – Dec 2025

- Found the root cause of cracking in vacuum-formed game packaging trays; new standards (larger corner radii, thinner gauge, carton corner inserts) save \$120k/year
- Built a cost-estimating tool (Power Apps, Power Query, SharePoint) from a database of past quotes; cut estimates for 4 engineers from 1–2 hours to minutes, saving ~\$100k/year
- Led a 5-person co-op team on a new toy concept; designed a spring-loaded rack-and-pinion slide mechanism and fit salvaged electronics into 3D-printed PLA prototypes
- After tariff-driven factory moves put NERF items behind schedule, worked with the PM to rank urgent items and re-route projects to other vendors

Project Engineer Co-op | **Beacon Consulting Group**, Medford, MA

Jul 2024 – Dec 2024

- Analyzed cost-to-complete on commercial construction projects; wrote a VBA macro that inserts and captions site photos in reports

Junior Designer & CAD Operator | **Davey Engineering & Construction**, Canton, MA

Jun 2021 – Dec 2023

- Modeled fire protection, HVAC, and plumbing systems in 2D/3D (Bentley OpenBuildings) for ~30 building projects
- Ran fire protection hydraulic calculations; led weekly on-site coordination meetings with engineers and foremen

Projects

BenchPress Automated Folding Picnic Table – ME Design (5-person team)

Summer 2026

- Analyzed the bench frame and brace with FBDs, stress, Johnson buckling, and Goodman fatigue (0–200 lb cycles); when the brace fell short at a 1.6 buckling SF, solved for the yield strength needed to reach SF 2
- Sized the frame-to-brace bolt for shear (Grade 1, SF 4.8); built all team CAD in SolidWorks and 3D-printed the fit-test parts

Flexible Micro-Supercapacitors – Senior Capstone | *Technical Lead*

Spring 2026 – Spring 2027

- Technical lead of a 6-person team designing a flexible micro-supercapacitor; researched electrode materials that guided the choice of CNT electrodes, gel electrolyte, and Kapton/PET

Compact Animatronic Eye Mechanism | *SolidWorks, 3D Printing, Arduino C++*

- Designed a 3D-printed animatronic eye (64 mm eyeball) whose 12-tooth, module-0.8 gear pair links both eyelids, so two SG90 servos drive blinking and a 100° look sweep; refined gear module and pivot clearance over 3 versions