Scott Torzewski

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EDUCATION

Lafayette College: *Bachelor of Science, Electrical and Computer Engineering | Math Minor* *May 2025* | **Easton, PA**
Saint Louis University: *Engineering Study Abroad* *Spring 2023* | **Madrid, Spain**

SKILLS

Languages & Platforms: Python • SQL • SystemVerilog • MATLAB • LTspice • AutoCAD • Fusion • KiCad • Excel
Technical Skills: Machine Learning • PCB Design & Layout • Embedded Systems • Circuit Design • Microcontrollers Biomedical Systems • GD&T • 3D Printing • Mechanical Design • Data Analysis • Multidisciplinary Collaboration

PROJECTS

Manufacture Defect & 3D Print Python ML Models | *Machine Learning* *February 2025*

- Developed a machine learning model to predict 3D-printed part quality using surface roughness, elongation, and tensile strength data. Applied multiple regression techniques improving prediction accuracy by 7.1% (R^2: 0.8648 → 0.9353) and reducing error rates (MAE ↓ 25%, RMSE ↓ 30%) through hyperparameter tuning. Optimized model performance with feature engineering and streamlined workflow using Python, Jupyter, and Scikit-learn.

Smart Assisted Living Environment | *Embedded Systems, Electronics & CAD Design* *August 2024 - Present*

- Designed a 20-component automated security system, integrating a custom PCB with optimized trace layouts to improve voltage output and reduce signal interference by 30% via oscilloscope. Programmed Raspberry Pi Pico W in Python for seamless hardware-software integration. Engineered a dual-spring assist kick-button system for disabled users, creating intricate 3D models in Fusion 360 to optimize durability, accessibility, sensor integration.

Enzyme Clustering Mathematical Model & Physiological System Analysis | *Biomedical Systems* *December 2024*

- Developed a MATLAB/Simulink-based model simulating cancer cell enzyme clustering to analyze metabolic pathway shifts, optimizing model for 92% accuracy against real-world data. Integrated sensor applications to quantify physiological system dynamics through deconstruction of circuit modeling to gain biomedical insights.

WORK EXPERIENCE

Day & Zimmerman | Mason & Hanger: *Electrical Engineering Intern* *May 2024 - August 2024* | **Lexington, KY**

- Developed and optimized critical electrical systems for federal and military facilities using advanced CAD/BIM platforms, significantly improving design efficiency and reducing iteration cycles through precise system modeling.
- Contributed to 3 successful project bids by analyzing electrical schematics, conducting thorough engineering calculations, assisting with submittals & cost estimate preparations achieving major reductions in project costs.

Royce Brook Golf Club: *Operations Associate* *May 2022 - August 2023* | **Hillsborough, NJ**

- Provided exemplary service to over 5000 customers and developed a logistics system for monitoring enrollment admissions, reducing weekly operational costs by 10% and streamlining customer registration processes.

LEADERSHIP EXPERIENCE AND ACTIVITIES

Johnson & Johnson: *Technology Awareness Program (TAP) | Market Performance Group Externship Workshop* *2022*

- Project lead in the design of a transportation logistics system and secure patient info website for healthcare crisis.
- Completed course in Marketing Insights and participated in a team-based case study with Care With Pride®.

Boy Scouts of America: *Eagle Scout | Meritorious Award | World Conservation Award* *March 2013 - August 2018*

- Led a team of 35 volunteers in the design and construction of a roof for an outside dog enclosure, improving shelter capacity and safety, totaling 125 hours to project completion.
- Received Meritorious Award for lifesaving actions on backpacking excursion, demonstrating crisis management.

Volunteer Work: *Gigi's Playhouse | DKE Fraternity Member* *June 2019 | September 2022 - Present*

- Volunteered several weeks caring for children at Gigi's Playhouse, Down Syndrome Achievement Center.
- Actively participated in philanthropic initiatives and service events as a member of Delta Kappa Epsilon.

Awards: Eagle Scout, BSA • Marquis Scholar, Lafayette College • Bergh Family Fellow Recipient
Course: Sensors & Electronic Systems • Embedded Systems • Digital & Solid-State Circuits • Data Structures/Algorithms Probability • Statistics • Economics • Biomedical Systems • Industrial Electronics & Control Systems • Design Thinking