

# Timothy Bielefeld

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## Education

**Purdue University** - West Lafayette, IN

**Bachelor of Science in Electrical Engineering** - May 2028

- GPA: 4.00; Dean's List/Semester Honors, 2024-2025
- Relevant coursework: Signals & Systems, Electromagnetism, Python for Data Science, Advanced C Programming, Linear Algebra, EE Fundamentals I and II + Labs

## Technical Skills

- Java and C/C++
- Python with NumPy and SciPy
- MATLAB
- AutoCAD, Inventor, Revit, OnShape
- LTSpice Simulation
- GitHub version control
- SQL database management
- Excel data analysis
- Circuit design and analysis
- Arduino and microcontrollers

## Work Experience

**Trainer**, May 2025 - Current

**Golden Boot Soccer** - Fairfax, VA

- Refined coaching techniques to provide players with elite training regimens
- Delivered advanced training sessions for 100+ athletes, applying techniques learned from Major League Soccer and collegiate coaches.

**Trainer and Referee**, June 2018 - December 2024

**Great Falls Reston Soccer Club** - Reston, VA

- Trained and mentored 70+ youth athletes, developing leadership and communication skills.
- Managed 50+ matches, ensuring fairness and safety under the laws of the game.

## Projects

**Wearable Haptic Feedback System for Soccer Skill Reinforcement**, 2025 - Current

- Prototyping wearable vibration bands using Python and microcontrollers to reinforce coaching instructions via timed haptic feedback.
- Programmable for different positions, environments, and coaching points.

**Audio Equalizer**, 2025

- Planned, modeled, designed, and tested a 3-band functional audio equalizer capable of manipulating bass, midrange, and treble audio signals, recombining, and then amplifying for a smooth, customizable audio output.

**Cruise Control Algorithm**, 2025

- Programmed a multi-function MATLAB algorithm to identify cruise control parameters from noisy sensor data. Delivered a fully-tested, client-ready technical package including updated scripts, data analysis plots, and a technical brief summarizing accuracy and improvement justifications.

**Artificial Intelligence Paper**, 2024

- Authored a research paper analyzing Artificial Intelligence's impact on engineering practices both ethically and developmentally for Advanced Systems Engineering Corporation, a systems engineering and consulting company.

## Activities

- Soccer, Purdue Club Soccer - Safety and Facilities Officer (2026), GFRSC (Captain 2023, 2024), Players Soccer Academy (Captain 2022), Langley High School Varsity(Captain 2024), 2020 - Present
- Arduino Circuit Design Projects: stoplight, kitchen timer, temperature/humidity sensors