

# Caleb Bornman

Macro thinker who translates complex problems into elegant technical solutions. Left embedded systems role in early 2025 to pursue AI-assisted development, exploring diverse technical domains and discovering where technology meets real-world impact. Built systems across SaaS, manufacturing, environmental tech, and infrastructure to understand the changing technical landscape. Proven ability to identify patterns across technical and business domains, demonstrated learning velocity.

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## Education

### **Messiah University - Bachelor of Science in Engineering (Honors Program)**

**2015 - 2019**

- Electrical and Computer Concentrations, Cumulative GPA: 3.71/4.00
- Self-financed education through academic scholarships and work
- Residence Life Senior Residential Assistant

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## Currently

### **Software Engineer [www.calebbornman.com](http://www.calebbornman.com)**

**February 2025 - Current**

Built diverse systems across SaaS, manufacturing, environmental tech, and AI/ML applications to rapidly master full-stack development and emerging technologies. See recent talk: [25 Projects in 6 Months: Learning to Love Software Again](#)

- **ParkingPercent** - AI-powered occupancy tracking enabling cities/organizations to optimize parking infrastructure with modern API
- **WeldCount** - Engineering drawing weld symbol ML detection to aid job takeoff and estimation
- **Capstan Production Tracking** - Manufacturing operations digitization removing paper logs and improving production oversight

Technical Familiarity:

- Backend: Rust Axum, Python FastAPI, Node.js
- AI/ML: Detectron2, YOLOv11, Whisper, llama.cpp, Ollama, CUDA/ROCM, PyTorch
- Data: PostgreSQL (Prisma, SQLx), Redis, Payload CMS, Homelab
- Infrastructure: Docker, AWS S3, Modal, Clerk, LemonSqueezy/Stripe, Google Maps, Google Translate
- Embedded Systems: C, Matlab, Simulink, ESP32 IoT, Linux/Unix,
- Frontend: React, Next.js, TailwindCSS

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### **Cross-Domain Creative Projects [www.lancasterfilmco.com](http://www.lancasterfilmco.com)**

**2017 - Current**

Business owner and passionate photographer demonstrating expertise across technical and creative domains. Leadership in community building and technical innovation applied to creative fields.

- [Why I Choose to Ride a Bike](#) - Environmental Protection Agency 2024 My Electric Ride Contest - 2nd Place
- [Workshop leader](#) - Curating community photography gallery at Ware Center (June 2026) with local street photographers
- Engineering x Photography - [Automated Slide Digitizer](#) | [Film Development Water Bath Heater](#)

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## Leadership

### **World Economic Forum Global Shapers Lancaster Impact Officer/Vice-Curator**

**July 2023 - Ongoing**

### **The Common Wheel Nonprofit Board Secretary/Vice President**

**September 2022 - Ongoing**

### **Collaboratory for Strategic Partnerships Student Board Member**

**August 2016 - May 2018**

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## Previous Experience

### **Embedded Software Engineer II - CNH Industrial**

**March 2021 - February 2025**

- Developed initial features for combines in C and with model-based design (Matlab Simulink)
- Supported system testing of software on machine (CAN, LIN) and with simulation environment (C#)
- Cross functional team working in USA, Belgium, Brazil, and India
- Version control experience with SVN and Git. Polarion ticketing and sprint system

### **Electrical Design Engineer - Exelon Peach Bottom Atomic Power Station**

**October 2019 - March 2021**

- Prepared Instrumentation & Control designs for temperature/flow switches, radiation monitors
- Cable failure analysis for plant system impacts due to heat degradation of cable insulation
- EMI/RFI analysis for portable wireless devices and system modifications, utilizing MIL standards