

Grigor Pahlevanyan

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🔗 [Portfolio](#)

🌐 [Grigor Pahlevanyan](#)

🔗 [Grigor-Pahlevanyan](#)

Education

McMaster University, B.Eng. in Mechatronics Engineering with Coop

Sept 2020 – May 2025

- GPA: 3.8/4.0
- **Coursework:** Control Systems, Software Development, Predictive Intelligence, Embedded Systems, Digital and Analog Circuit Design, Data Structures & Algorithms, Thermodynamics

Professional Experience

Tesla | Power Electronics Program Manager Intern

Palo Alto, CA

May 2024 – Aug 2024

- Managed four vehicle projects, ensuring timely milestone delivery.
- Established clear communication channels across management layers.
- Developed project roadmaps and delegated tasks to cross-functional teams.
- Demonstrated adaptability and productivity in a fast-paced environment.
- Built stakeholder confidence through clear communication and consistent delivery.

Thales | Component Engineering Intern

Toronto, ON

May 2022 – Aug 2023

- Automated database migration of 1000+ components using Python and Selenium.
- Managed component databases and maintained detailed documentation.
- Processed ECN requests, ensuring compliance with technical specifications.
- Conducted obsolescence analysis to identify supply chain risks.
- Optimized component selection through cost and performance analysis.

Extracurricular Experience

Battery Workforce Challenge | BMS Hardware Lead

Sept 2024 – Present

- Leading BMS hardware development, managing a team of 8 engineers.
- Coordinating with cross-functional teams for system integration and performance.

Solar Car Project | Electrical Manager

Nov 2021 – Aug 2024

- Managed electrical team workflow and inter-department coordination.
- Designed 110V high-voltage electrical architecture for power distribution.
- Developed Automatic Transfer Switch with integrated control systems.
- Created pre-charge circuit board for motor controller integration.
- Engineered 96V battery pack with comprehensive BMS implementation.
- Designed Power Management board for system-wide power control.
- Implemented Pedal Control program with analog-to-PWM signal conversion.
- Utilized Altium and Eagle for PCB design and manufacturing.
- Researched and implemented Maximum Power Point Tracker (MPPT) devices.

Technical Projects

Vehicle Safety Mechanism | Independent Research Project

Nov 2021 – Present

- Invented a safety seat system using LiDAR for collision detection.
- Developed AI-driven algorithms for real-time seat position adjustment.
- Integrated NVIDIA Nano Jetson, AGX ORIN, and Oak-D Lite 3D camera.
- Engineered control systems using stepper motors and high-power transformers.
- Patent application in progress; documentation available at [project portfolio](#).

AI Meeting Assistant | Capstone Project Lead

Sept 2024 – Present

- Developed meeting analysis system using OpenAI's Whisper for speech recognition.
- Implemented speaker diarization using pyannote for speaker identification.
- Integrated LLM models for automated meeting minutes and action items.
- Deployed solution on NVIDIA AGX ORIN for high-performance AI processing.
- Developed attendance tracking and key item extraction features.

Publications

Vehicle Seat Design to Mitigate Collision Impact on Occupant Safety

July 2023

[BRIC Symposium Proceedings](#)

[Certificate of Participation](#)

Technical Skills

Software Development: C++, C, Python, Julia, MATLAB/Simulink, JavaScript, Git, Docker

Electrical Design: Altium, Eagle, Fusion 360, LTSpice, NI Multisim

Mechanical Design: SOLIDWORKS, Autodesk Inventor, AutoCAD

Machine Learning: Neural networks, reinforcement learning, model predictive control

Other Tools: SAP ERP tool, CleaQuest, GitHub, Wireshark, JIRA, Confluence

Other Skills: Proficient in Linux and ROS