Michael Doyle

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EDUCATION

University of Notre Dame | Notre Dame, IN — May 2029
Bachelor of Science — *GPA: 3.24*
Computer Engineering | Minor: Philosophy, Politics, and Economics

RESEARCH AND TECHNICAL EXPERIENCE

Data Security and Privacy Lab | Notre Dame, IN — August 2026 – Present
Research Assistant

- Built a quote-collection pipeline on Google Cloud confidential VMs, parsing DER-encoded X.509 platform certificates to inventory identifying fields in Intel TDX attestation
- Measured attestation credential stability across new quotes and reboots, establishing platform identifier persistence

Engineering Leadership Council | Notre Dame, IN — April 2026 – Present
Website Manager

- Maintain and deploy the council's public website through a Git-based Netlify pipeline
- Diagnosed a broken Netlify build on the council's Jekyll site, downgrading the pinned Ruby version to restore gem compatibility and unblock automated deploys

Wireless Institute | Notre Dame, IN — January 2026 – November 2026
Research Assistant

- Established an end-to-end FPGA development workflow for the RadioHound SDR project, enabling HDL module authoring in Python and the high-level generation of synthesizable Verilog code; published as an open-source repo and technical paper for incoming undergraduate research assistants
- Instantiated a Python-generated module into an AMD Vivado project; validated signal output on a Zynq-7000 SoC against a 40 MHz clock using oscilloscope capture and MATLAB waveform reconstruction

PROJECTS

Passagework | Personal Project — July 2026 – August 2026
Creator

- Built and shipped a local-first browser tool (TypeScript, Vite) that loops short passages of a recording with the sheet music on screen, for hands-free instrument practice
- Designed a gapless loop on the audio thread and a pitch-preserving WSOLA time-stretcher down to 0.5× speed
- Wrote the architecture spec and milestone plan that Claude Code implemented: four layers (pure core, audio, storage, UI) enforced by an import-scanning test, with 93 unit tests

Machine Learning for Engineers | Dublin, Ireland – Engineering Study Abroad — June 2026 – July 2026
Project Team Member

- Built and evaluated kNN, ridge, and random-forest models to predict residential energy loads from architectural features, achieving an R^2 of 0.72 on heating load
- Deployed the model for interactive inference via both a Gradio app within Google Colab and a self-hosted instance

LEADERSHIP AND ACTIVITIES

The Observer | Notre Dame, IN — September 2025 – Present
Opinion Columnist

- Write a biweekly column focusing on faith, compassion, and intersectionality on college campuses; work has also appeared in The Wall Street Journal's Future View

Model United Nations | Notre Dame, IN — September 2025 – Present
Treasurer, Secretary-General of General Assemblies

- Administer and oversee 2 general committees, each with 40+ delegates, for the team's annual high school conference

Eagle Scout, Boy Scouts of America – Haddonfield, NJ, 2025

SKILLS AND CERTIFICATIONS

Languages: Python, C/C++, TypeScript, Verilog, SQL, HTML/CSS
Security: Intel SGX, Intel TDX, remote attestation, X.509 certificate parsing
Tools: Claude Code, Git, Linux, Google Cloud Platform, Netlify, Vite, Gradio
Certifications: ISC2 Certified in Cybersecurity (CC) – March 2026