Michael Ilie

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EDUCATION

University of Maryland **College Park, MD, USA**
3.7 GPA, B.S. in Computer Science, Interdisciplinary Business Honors *Graduating May 2027*

TECHNICAL SKILLS

Programming Languages: Rust, C/C++, Python, Ocaml, F#, Haskell, CUDA
Libraries/Tools PyTorch, Polars, Pandas, HuggingFace Transformers, Accelerate, TRL, PEFT, Spark, Databricks
Compliance/Regulatory: SBIR/STTR Grant Writing and Budgeting, HIPAA, FDA Cybersecurity, Experience with QMS, ISO, UL for electromagnetic interference. OSHA Forklift certified.

WORK EXPERIENCE

Head of Research
HackAPrompt - San Francisco, California *December 2024 - Present*

- Scaled human AI red-teaming data collection, capturing **2 billion tokens** from **30,000+ users** by designing and launching agentic and CBRNE challenges, and externally collaborating in the Florian Tramer MATS stream.
- Captured **100 universally transferable jailbreaks** for chemical and pathogen harms across frontier reasoning models, by collaborating with OpenAI and designing targeted challenge sets.
- Engaged **thousands of business leaders, researchers, and engineers**, with talks to the Microsoft ML/AI community (**2nd largest internal**), UAE Government, and Modev GNRT, by preparing, assisting with, and delivering technical presentations and workshops.

Applied ML Researcher
Careplots Inc. - Rockville, Maryland *September 2023 - Present*

- Accelerated policy analytics delivery, reflected in shipped AI prototypes and RWD studies across health equity and outcomes, by leading project design and contributing to NSF/USDA/SAMHSA RFPs.
- Increased throughput on CMS VRDC datasets covering **150M beneficiaries**, resulting in **180% faster queries** and stable workloads, by building scalable Python/SQL jobs and optimizing SAS pipelines.
- Raised entity-linking precision between USDA and Circana IRI datasets, improving accuracy by up to **95%**, by applying open-source LLM embeddings and probabilistic matching methods.

Senior R&D Engineer, Grant Writer
Lumo Imaging - Rockville, Maryland *January 2023 - March 2024*

- Spearheaded the successful acquisition of a **$1,000,000 NSF Phase II STTR award** by architecting the technical plan for synthetic-data dermatology AI models and co-authoring the commercialization strategy.
- Developed novel AI lesion-mapping on the Flacara Handheld, constructing a SwiftUI ARKit prototype and guiding a team of 4 engineers, securing **$40,000** through NIH sales and UMBC grants.
- Increased R&D execution speed (faster prototyping and greater compliance readiness) by establishing 3D printing workflows, advancing HIPAA readiness, optimizing simulations, and managing a 10-person project.

Embedded Engineer, Project Manager
Cision Vision - Palo Alto, California *May 2022 - October 2022*

- Improved biopsy device reliability, evidenced by **100%** reduction in power failures, by reverse engineering battery management system and writing custom Arduino programmer for the InVision lymph-node detection device.
- Reduced image shadow occurrences by **80%**, leveraging multi-spectral data to train a neural network in PyTorch.
- De-risked regulatory milestones, leading FDA cybersecurity tasks and contributing to QMS/EMI preparations, resulting in meeting all regulatory milestones on or ahead of schedule.
- Strengthened team capacity, reflected in 2 hires from 40+ interviews, by coordinating with PMs and assisting management of a 15-person engineering team.

PUBLICATIONS

- The Prompt Report: A Systematic Survey of Prompting Techniques **First Author** – Led a team of 30+ people from OpenAI, Stanford, Google, CMU, and UMD in conducting this survey. Currently at **340 citations**.
- SIRVLAS: A CubeSat instrument suite for enhanced ionospheric charge density measurements – Designed and ran atmospheric simulation for remote sensing instrumentation validation for a cubesat.