MICHAEL ILIE

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/mcilie

https://mci.sh

EDUCATION

- Takoma Park Middle School STEM Magnet program (2016-2019)
  - GPA: 4.0
- Montgomery Blair High School Science, Mathematics, and Computer Science Magnet program (2019-present)
  - GPA: 3.9
- Volunteer hours: 112
- Relevant Coursework:
  - Magnet Analysis
  - Magnet Physics
  - Magnet Discrete
  - Algorithms and Data Structures
  - Magnet Research and Engineering
  - Magnet Foundations of Technology

TECHNICAL SKILLS

- Programming languages:
  - Python, C, C++, CUDA, Julia, Swift, NimLang, Go, Java, Node.js, F#
- Data Science/Machine Learning frameworks:
  - PyTorch, Flux.jl, Keras, Neataptic.js, Synaptic.js, cuBLAS, cuDNN, SciPy, NumPy
  - Dask, Dask-Cuda, Pandas-Profiling, Julia Distributed package
- Embedded:
  - Arduino, AVR, RP2040, RPi 3b/4b/cm3/cm4/0 2w, SAMD 21,
  - Soldering
  - I2C, SPI, UART, OneWire, USB, BLE
  - Gem5
  - Experience with FPGAs (Xilinx Vivado, Vitis HLS, Intel Quark, Lattice Diamond, Cyclone 10CL016, XC7A100T, MachXO2 LCMXO2, NVME, DDR3)
- Simulations programming
  - Written simulations in CUDA, C++, Python, Julia
  - Simulated remote sensing optical payload using python, fortran, and GLOW (Airglow model from NCAR)
  - Nasa GMAT (STK equivalent)

EXPERIENCE

- Software engineer at Medapptic, LLC (2020-2021)
  - Helped win and perform on NSF SBIR phase 1 grant for $225,000
  - Helped win and perform on TEDCO Rubric grant for $100,000
  - Co-author on NIST SBIR phase 1 grant
- Blair3sat Optical Programmer (2019-present)
  - Programmed optical payload simulations using C, Python, Fortran, and GLOW
  - Co-author of SPIE paper https://doi.org/10.1117/12.2567787
  - Embedded programmer/ Integrations
- Mechatronics intern at PSYONIC (June-July, 2021)
  - Worked on developing an application to interface with Bionic Ability Hand via Bluetooth Low Energy
- Lumo Imaging intern (January 2022-Present)
  - Work on calibrating dermoscopic full body imaging device
- Montgomery Blair Highschool Machine Learning Club Captain (2021-present)
  - Taught machine learning concepts to students grades 9 through 12
- Takoma Park SGA Vice President (2018-2019)
  - Raised thousands of dollars in funds
  - Successfully conducted campaign to encourage record voter turnout for SMOB election

ACHIEVEMENTS

- Imagine Cup 2022 Global Finalist
- American Society for Mechanical Engineering 1st place price Science Montgomery
- 2022 UPenn HealthHacks
  - 1st place overall
  - Popular Choice
  - 1st place Chronic disease track
  - AB In-bev award
- ExploraVision 2022 Honorable Mention (top 10%)
  - Project: Manufacturing in Microgravity
- 1st place Science-Montgomery CS Division 2018
  - Project: Analyzing the Security of Password Construction Standards
- 2nd place Science-Montgomery CS Division 2019
  - Project: Using Machine Learning to detect Deepfakes
- Top 5 United We Learn Challenge
- 1st place Aerospace Corporation regional fair winner
- 3rd place Thomas Jefferson BioCode competition
- 1st Place MBIT Coding Competition