Anthony Baietto

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Education

Ph.D. in Computer Science and Engineering Jan 2020 – Dec 2024
The Ohio State University Columbus, OH

- Thesis: Data-Aware Tuning of Deep Learning Models

M.S. in Computer Science and Engineering May 2024
The Ohio State University Columbus, OH

B.S. in Computer Science and Engineering Aug 2017 – May 2020
The Ohio State University Columbus, OH

- Accepted to BS/MS program (2020)
- Maximus Scholarship (2017, 2018, 2019)
- National Buckeye Scholar (2017, 2018, 2019)
- Dean's List (2017, 2018, 2019)

Experience

Artificial Intelligence Software Developer Jan 2020 – Present
Applied Research Solutions Beavercreek, OH

- Collaborated with Air Force Research Laboratory on radar waveform design (AutoWav project)
- Developed novel neural network solution for interference mitigation resulting in over $2000x$ speedup

Graduate Teaching Assistant AU21, SP22, AU23, SP24, AU24
The Ohio State University Columbus, OH

- Taught operating systems with responsibilities including lecturing and preparing assignments/exams
- Mean student evaluation score: 4.47 / 5.00 (department average: 4.26)
- Winner of Elanor Quinlan Graduate Teaching Award (2023)

Graduate Research Assistant Aug 2020 – Dec 2024
The Ohio State University Columbus, OH

- Developed innovative AI dataset augmentation techniques for neuromorphic computation
- Introduced neuromorphic computing obstacle along with generative AI mitigation

Undergraduate Research Assistant Aug 2019 – Dec 2019
ReRout Lab Columbus, OH

- Constructed demonstration of SoftwarePilot, a fully autonomous aerial system

IT Intern May 2019 – Aug 2019
CPTechnologies Company Blacklick, OH

- Developed and maintained real-time production management software with database support
- Networked and debugged 40+ kiosks and remote terminals
- Provided technical assistance for 30+ employees

Undergraduate Teaching Assistant SP19, AU19
The Ohio State University Columbus, OH

- Held office hours to assists students master course concepts
- Developed automated Kahoot! assignment grading tool

Participant Oct 2017
HackOHI/O Columbus, OH

- Led team of 4 undergraduates in 24 hour hackathon
- Developed Android application for automated calendar event creation from emails
- Winner of 24 hour Rockwell Automation "Automation Challenge"

Skills

Programming Languages: Python, C, C++, Bash, MATLAB, Java, JavaScript

Tools & Frameworks: TensorFlow, PyTorch, Scikit-Learn, Microsoft Office, LaTeX

Publications & Presentations

- **Baietto, A.**; Stewart, C.; Bihl, T.J. Dataset Assembly for Training Spiking Neural Networks. Neurocomputing 2025, 622, 129207. https://doi.org/10.1016/j.neucom.2024.129207
- **A. Baietto** and T. Bihl, "Generative Data for Neuromorphic Computing," 2025 Hawaii International Conference on System Sciences (HICSS), Big Island, HI, USA, 2025, pp. 7246-7255, https://hdl.handle.net/10125/109719
- **A. Baietto**, C. Stewart and T. Bihl, "Dataset Augmentation for Robust Spiking Neural Networks," 2023 IEEE International Conference on Autonomic Computing and Self-Organizing Systems Companion (ACSOS-C), Toronto, ON, Canada, 2023 pp. 116-121. doi: 10.1109/ACSOS-C58168.2023.00050
- Poster Presentation, "Toward Robust Spiking Neural Networks", International Conference on Neuromorphic Systems (ICONS) (2023)
- **A. Baietto**, J. Boubin, P. Farr and T. J. Bihl, "Lean Neural Networks for Real-time Embedded Spectral Notching Waveform Design," 2022 IEEE 31st International Symposium on Industrial Electronics (ISIE), Anchorage, AK, USA, 2022, pp. 1121-1126, doi: 10.1109/ISIE51582.2022.9831772.
- **Baietto, A.**; Boubin, J.; Farr, P.; Bihl, T.J.; Jones, A.M.; Stewart, C. Lean Neural Networks for Autonomous Radar Waveform Design. Sensors 2022, 22, 1317. https://doi.org/10.3390/s22041317

Patents

- **U.S. Patent Application No. 63/718,921** "SYSTEMS AND METHODS FOR TRAINING NEURAL NETWROKS," filed November 11, 2024. Patent pending.
- **U.S. Patent No. US 2025/0020775 A1** "METHOD OF ANALYZIING AND CORRECTING A COMPLEX WAVEFORM BY REAL AND IMAGINARY PARTITIONING AND RECOMBINATION," published January 16, 2025.
- **U.S. Patent No. US 2024/0249139 A1** "METHOD OF ANALYZING AND CORRECTING A DYNAMIC WAVEFORM USING MULTIVARIATE ERROR LOSS FUNCTIONS," published July 25, 2024.