

# Anthony Baietto

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## Education

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| <b>Ph.D. in Computer Science and Engineering</b><br><i>The Ohio State University</i>   | Jan 2020 – Dec 2024<br>Columbus, OH |
| <ul style="list-style-type: none"><li>• Thesis: Data-Aware Tuning of Deep Learning Models</li></ul>  |                                     |
| <b>M.S. in Computer Science and Engineering</b><br><i>The Ohio State University</i>  | May 2024<br>Columbus, OH            |
| <b>B.S. in Computer Science and Engineering</b><br><i>The Ohio State University</i>  | Aug 2017 – May 2020<br>Columbus, OH |
| <ul style="list-style-type: none"><li>• Accepted to BS/MS program (2020)</li><li>• Maximus Scholarship (2017, 2018, 2019)</li><li>• National Buckeye Scholar (2017, 2018, 2019)</li><li>• Dean's List (2017, 2018, 2019)</li></ul> |                                     |

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## Experience

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| <b>Artificial Intelligence Software Developer</b><br><i>Applied Research Solutions</i>   | Jan 2020 – Present<br>Beavercreek, OH        |
| <ul style="list-style-type: none"><li>• Collaborated with Air Force Research Laboratory on radar waveform design (AutoWav project)</li><li>• Developed novel neural network solution for interference mitigation resulting in over 2000x speedup</li></ul>   |  |
| <b>Graduate Teaching Assistant</b><br><i>The Ohio State University</i>   | AU21, SP22, AU23, SP24, AU24<br>Columbus, OH |
| <ul style="list-style-type: none"><li>• Taught operating systems with responsibilities including lecturing and preparing assignments/exams</li><li>• Mean student evaluation score: 4.47 / 5.00 (department average: 4.26)</li><li>• Winner of Elanor Quinlan Graduate Teaching Award (2023)</li></ul> |  |
| <b>Graduate Research Assistant</b><br><i>The Ohio State University</i>   | Aug 2020 – Present<br>Columbus, OH           |
| <ul style="list-style-type: none"><li>• Developed innovative AI dataset augmentation techniques for neuromorphic computation</li><li>• Introduced neuromorphic computing obstacle along with generative AI mitigation</li></ul>  |  |
| <b>Undergraduate Research Assistant</b><br><i>ReRout Lab</i>   | Aug 2019 – Dec 2019<br>Columbus, OH          |
| <ul style="list-style-type: none"><li>• Constructed demonstration of SoftwarePilot, a fully autonomous aerial system</li></ul>   |  |
| <b>IT Intern</b><br><i>CPTechnologies Company</i>  | May 2019 – Aug 2019<br>Blacklick, OH         |
| <ul style="list-style-type: none"><li>• Developed and maintained real-time production management software with database support</li><li>• Networked and debugged 40+ kiosks and remote terminals</li><li>• Provided technical assistance for 30+ employees</li></ul>                                   |  |

## Participant

*HackOHIO*

Oct 2017  
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”

## Undergraduate Teaching Assistant

*The Ohio State University*

SP19, AU19  
Columbus, OH

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

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## Skills

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

**Tools & Frameworks:** TensorFlow, PyTorch, Scikit-Learn, Microsoft Office, L<sup>A</sup>T<sub>E</sub>X

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## 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>

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## Patents

- **U.S. Patent Application No. 63/718,921** “SYSTEMS AND METHODS FOR TRAINING NEURAL NETWORKS,” filed November 11, 2024. Patent pending.
- **U.S. Patent Application No. 18/418,576** “METHOD OF ANALYZING AND CORRECTING A DYNAMIC WAVEFORM USING MULTIVARIATE ERROR LOSS FUNCTIONS,” filed January 22, 2024. Patent pending.
- **U.S. Patent Application No. 18/418,585** “METHOD OF ANALYZING AND CORRECTING A COMPLEX WAVEFORM BY REAL AND IMAGINARY PARTITIONING AND RECOMBINATION,” filed January 22, 2024. Patent pending.