Michael Bronikowski

(607) 644-6464 | mbronik1@binghamton.edu | 401 Ross Hill Road, Vestal NY 13850

Education

Master of Science in Computer Science, Concentration in AI   **Binghamton, NY**
Binghamton University - Watson School of Computing   *Jan 2025 - May 2026 (Expected)*
- **GPA:** 3.8 **Coursework:** Deep Learning, Intro to AI & ML, Data Structures and Algorithms, Quantum Computing

Bachelor of Science in Engineering Physics, Bachelor of Arts in Mathematical Sciences   **Binghamton, NY**
Binghamton University - Harpur School of Arts & Sciences   *Aug 2019 - Dec 2024*

Research and Publications

Binghamton University - Assistant Researcher   **Binghamton, NY**
CRAFT Lab - Truthfulness in LLMs, Retrieval Augmented Generation, and Agentic AI   *Aug 2025 - Present*
- Exploring the underlying differences and overlaps between LLM outputs and human language/ reasoning to develop methods for deeper human and AI collaboration through more human-aligned, reliable, and creative AI systems

Publications
  - [Stylistic Contrastive Learning for Human-Like AI Text Generation](#), *Agents4Science 2025, Stanford University*
  - [Scalable Oversight in Multi-Agent Systems: Provable Alignment via Delegated Debate and Hierarchical Verification](#), *Agents4Science 2025, Stanford University (Top 10 Paper by Score)*

Pre-Publications
  - [Feature not a Flaw: Leveraging ``AI Creativity" (Hallucinations) for Scientific Discovery](#)

AIR (Autonomous Intelligent Robotics) Lab - Large Language / Vision Language Models   *Sep 2023 - Dec 2024*
- Exploring the supplementation of computer vision models with natural language processing models to create a common sense reasoning system replicating intelligent disobedience in guide dogs for visually impaired users

Pre-Publications
  - [Towards Intelligent Disobedience for Robotic Guide Dogs: Evaluation of Dangerous Scenes using VLMs](#)

BuzzHive - Lead Researcher   **Binghamton, NY**
World Models for Environmental Understanding (Time Series & NLP)   *Jan 2024 - Present*
- Lead research on building world models for beehive environments using custom-built multimodal sensors and time series/NLP models to detect/ convey early anomalies in honeybee health and improve honeybee colony survival rates

Professional Experience

NYU Langone - Office of Technology Opportunities and Ventures (TOV)   **(Hybrid) - New York, NY**
AI Program Coordinator (Full Time)   *Feb 2025 - Present*
- Architect and ship NYU Langone's first wave of agentic AI tools for policy and contract driven workflows using LangChain, OpenAI, Tavily, and Azure including several deployed agents and a high-visibility C-Suite project
- Lead end-to-end development of custom AI applications from stakeholder discovery through Streamlit/CSS interfaces and production deployment, managing an offshore engineering team to deliver features quickly and reliably

AI Solutions Development Consultant   *Aug 2024 - Feb 2025*
- Researched and tested emerging AI tools and models to evaluate capabilities and fit for TOV's goals, delivering reports, demos, and recommendations that shaped the AI roadmap and led to a full-time offer
- Met with faculty and staff across NYU and NYU Langone to surface high-value AI use cases, scope internal agent projects, and coordinate with engineering and management to move them into the development pipeline

Binghamton University - Office of Entrepreneurship and Innovation Partnerships   **Binghamton, NY**
AI Process Development Intern - Technology Transfer Office   *Mar 2024 - Jun 2024*
- Evaluated existing processes to identify areas for improvement by introducing AI software tools and applications by working in depth with tech transfer officers to understand disclosure forms, patent applications, and licensing deals
- Improved the operational efficiency of workflows by introducing AI enabled tools, including building custom AI assistant solutions through Custom GPT's, custom developed software interfaces, and industry available AI tools

Hoku Analytics - Fintech Startup   **Honolulu, HI**
AI Software Engineering Intern   *Jan 2023 - Sep 2023*
- Restructured and optimized a Python-based AI/ML financial features library reducing processing time from 58 seconds to 3 seconds and integrating 30+ new features from C# technical analysis libraries
- Reverse-engineered over 200 mathematical and statistical academic studies into PyTorch models adding hyperparameters for AI/ML optimization totaling over 10 million data points and improving model accuracy by 50%

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Leadership

Binghamton University Bees Club **Binghamton, NY**
Executive Beekeeper *Aug 2023 - Present*
- Lead group beehive visits, taking care of on-campus beehives including routine hive inspections and honey collection

President *Aug 2021 - Jul 2023*
- Coordinated bee events for 370+ students teaching beekeeping methods and winning student's choice award: best club

Binghamton University Research Immersion Program **Binghamton, NY**
Course Assistant / Student Research Mentor - AI Deepfake Detection *Aug 2020 - May 2021*
- Advised a team of 6 students researching machine learning for fraudulent facial recognition tested over large datasets
- Prepared and presented research findings at Binghamton's research symposium to over 300 faculty and peer attendees

Entrepreneurship

Buzzhive, LLC **Binghamton, NY**
Co-Founder, CEO, Head of Beekeeping *Mar 2024 - Present*
- Designing and implementing an AI-powered beehive management system, integrating IoT sensors and predictive analytics to monitor hive health, reduce bee mortality, and optimize operational efficiency for beekeepers
- Lead development and prototyping of hardware and software solutions, securing funding and partnerships through grants, pitch competitions and 2024 REV Ithaca/ Cornell Proto-facturing Accelerator Graduate

Irek's Apiary, LLC **Binghamton, NY**
Co-Founder, Assistant Beekeeper, Head of Product *2012 - Present*
- Scaled sales and marketing operations for a 30-hive apiary, building a strong presence through farmers markets and a TikTok channel with over 60,000 followers fostering brand loyalty and happy honey customers
- Care for 30 beehives by performing routine inspections, monitoring hive health, managing colony growth, and ensuring sustainable honey production through practicing modern yet traditionally rooted beekeeping practices

Fine Mining, LLC **Binghamton, NY**
Co-Founder, CEO *Dec 2021 - Dec 2022*
- Built and scaled Fine Mining's high end computing hardware marketplace platform from concept to launch with over 5,000 impressions on the App Store and driving early user adoption through strategic marketing and product design
- Led the product design and development using Flutter with REST APIs for real-time inventory management and user authentication, and integrating Stripe API for secure payment processing

Startup Accelerators

Cornell University - REV Ithaca Startup Works **(Remote) Ithaca, NY**
Protofacturing & Manufacturing Startup Accelerator *Jul 2024 - Jul 2025*
- Transitioned BuzzHive's multimodal IoT beehive monitor from proof-of-concept to "design freeze" production prototype exploring user engagement, and data streaming for AI model training with Cornell Engineering partners

Binghamton University - Koffman Southern Tier Incubator **Binghamton, NY**
Software Startup Accelerator *Feb 2021 - Dec 2022*
- Learned go-to-market strategy for early-stage startups through one-on-one mentorship and group coursework, refining plans through customer discovery to improve user journeys, prioritize features, and prepare for scalable software

Awards, Competitions, and Public Presentations

Invited Speaker - "Future of AI and Nature" Shibuya QWS Academia, Waseda University, Tokyo JP	*Nov 28, 2025*
Finalist - 2025 FuzeHub NYS Innovation Summit Commercialization Competition	*Oct 29, 2025*
Second Place - 2025 City of Binghamton Business Plan Competition	*June 3, 2025*
First Place - 2025 New York State Business Plan Competition: AgTech	*Apr 24, 2025*
Nominee - 2025 Entrepreneur of The Year, Greater Binghamton Chamber of Commerce	*Apr 22, 2025*
Grand Prize - 2025 Cornell University DigitalAg Hackathon	*Mar 3, 2025*
Invited Judge - 2024 Binghamton University Entrepreneur Connect Club Pitch Competition	*Nov 22, 2024*
Invited Lecturer - Binghamton University School of Management - Entrepreneurship 460	*Sep 17, 2024*
First Place - 2024 New York State Business Plan Competition: Software & Services	*Apr 25, 2024*
State Finalist - 2023 New York State Business Plan Competition: Software & Services	*Apr 27, 2023*
Research Mentor of Impact Award - Binghamton University Research Immersion Program	*Dec 15, 2022*
Second Place - 2021 New York State Business Plan Competition: AgTech	*May 11, 2021*
National Finalist - Future Business Leaders of America Competition: Entrepreneurship	*Apr 11, 2019*
Team Captain - 6x Regional Gold Medalist, 3x Regional Silver Medalist Vestal Science Olympiad	*2018 - 2019*