Alessandro Ferrari

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EDUCATION

GEORGIA INSTITUTE OF TECHNOLOGY, College of Computing, College of Biological Sciences **Atlanta, GA**
Bachelor of Science in Computer Science, Minor in Biology *May 2026*
- **Concentration**: Intelligence, Systems & Architecture, *Dean's List* **GPA:** 3.93

EXPERIENCE

BigHat Biosciences (8VC) **San Mateo, CA**
Lab Automation Software Intern *May 2025 - Aug 2025*
BigHat designs antibody therapies using a combination of ML guided design and high-throughput autonomous labs.
- Programmed a fleet of 13 autonomous robot, integrating with our in-house LIMS, powering hundreds of weekly experiments
- Designed and deployed a distributed logging+metric ingestion system with the CTO, saving 2hr+ per week per engineer
- Developed fleet management solutions for autonomous code deployment/rollback, saving 30m+ per update per engineer
- Evaluated a new robotics framework (PyLabRobot), projecting 25% less dev overhead ($300K/yr), presenting results to CEO

Maverick Metals (YC S22) **San Antonio, TX**
Machine Learning Engineer Intern *May 2024 - Aug 2024*
Maverick manufactures enzymes that mine metals, clean oil, and perform a variety of commercial tasks.
- Managed a ML team leading 4 engineers through months of iteration culminating in a no-code protein design suite
- Developed generative protein design system combining distributed HPC and ML for protein fitness landscape exploration
- Worked directly with CEO in daily meetings to align the company's vision with its technology, focusing on generating value
- Contributed code to SOTA protein engineering models METL (Gitter Lab, UW Madison) and FragFold (Wei-Li, MIT)

Biocentis **Milan, Italy**
Software Engineer Intern *May 2023 - Aug 2023*
Biocentis is an agrotech company that leverages genetic engineering for vector pest control.
- Developed a GPU Agent Based Model to represent millions Drosophila Suzukii, from the Genotype to Swarm flight pattern
- Leveraged GPU C++ algorithms to cut down average simulation time from 8 hours (CPU + Python) to 3 minutes (GPU + C++)
- Designed a low level cross language simulation algorithm (Python+C++) and custom GPU to CPU memory transfer protocol
- Led biology-informed project from brainstorm to deployment, informing non-technical stakeholders of engineering choices

Egicon S.r.l. **New York, NY**
Embedded Firmware Developer Intern *Jun 2021 - Jul 2021*
Egicon S.r.l. designs and produces "Plug & Play" electronic solutions for high-performance systems.
- Developed bare metal C++ software for custom ARM-based single board computer to power motorcycle cockpit diagnostics
- Shipped embedded firmware to production circuit, which was printed and deployed on the field 10'000+ times

RESEARCH & PROJECTS

Gibson Lab @ Georgia Institute of Technology - *Preprint on Biorxiv. doi:10.1101/2025.07.25.666784* **Atlanta, GA**
Undergraduate Research Assistant *Jun 2023 - Aug 2024*
snATAC-Express infers Gene Expression from Prioritized Chromatin Accessibility Peaks using Machine Learning
- Developed and deployed biologically informed scRNA/scATAC pipelines to ensure replicable analysis
- Implemented and trained SOTA ML models, focusing on explainability and reproducibility of scientific results

CHIP8-rs (GitHub) **New York, NY**
Open Source Project Lead *Sep 2020 - Jun 2021*
- Developed one of the first Rust emulators for the CHIP8 virtual machine, considered the "hello world" of emulator design
- Implemented all components including memory, CPU, storage, all opcodes, all registers, and DMA for output

LEADERSHIP

Georgia Tech Bioinformatics Club **Atlanta, GA**
President *Jan 2023 - Present*
- Oversaw recruitment efforts on campus growing club to 50+ weekly recurring members, up 4x since 2023
- Launched and led our club's semesterly project, involving the top 10 club members in more in-depth weekly meetings
- Managed team of 5 exec members to organize talks with industry leaders (2 CEOs since 2023), projects and funding

SKILLS/INTERESTS

Technologies: Python, Java, C/C++, Rust, R, Typescript, React, Tensorflow, Jupyter, Git, AWS, Linux, Docker, Vertical Integration
Awards: 8VC Engineering Fellow 2025, First Place in the RomeCup robotics competition in 2015, Second place in 2014
Languages: Italian - Native, English - Native, French - Basic, Latin - Basic