Leonardo Ferrisi

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Education

B.S. Double Major Neuroscience and Computer Science | Union College | Schenectady, NY | Cum Laude..........................6/2023

Summary

Highly proactive and motivated professional offering a diverse skill set across several disciplines. Passionate about applying my experience to new and innovative solutions and ready to take initiative wherever my skills are needed.

Experience

Computer and Electrical Engineer | Naval Nuclear Laboratory | Niskayuna, NY .... **8/2023 – Present**
- Developing and maintaining the software and electronics powering the next generation of the United States Navy.

Student Technician | Union College Maker Labs | Schenectady, NY .... **9/2022 – 06/2023**
- Maintained Engineering Machine Shop for Students and Faculty at Union College.
- Trained roughly 20 students and faculty in operation of engineering machinery.

Neurotechnology Researcher | National Center for Adaptive Neurotechnologies | Albany, NY............................ **11/2021 – 6/2023**
- Developed software suite for conducting analysis on large datasets of electrophysiological activity resulting in a significant reduction in time spent analyzing datasets for future research.
- Optimized assistive communication Brain Computer Interface to use newer Dry-Electrode EEG equipment reducing the average setup time from roughly 1 hour to 5 minutes resulting in a potential 91.6% estimate in time saved.
- Completed a Senior Thesis project evaluating the effects of different auditory stimulus on Auditory Evoked Potentials.
- Utilized and further developed skills in Scientific Writing, Data Science, Software Engineering, Signal Processing, Machine Learning, Python, Documentation, Hardware, and Software utilized for Scientific Research, Analytical Skills and Research Methods in Computational and Cognitive Neuroscience.

Student Research Assistant | Union College Feller Lab | Schenectady, NY .... **3/2021 – 6/2023**
- Supported laboratory staff with stomatopod research and utilized AMIRA software for CT Imaging of invertebrate organisms.
- Produced documentation on operating hardware and software relating to biological research.
- Worked on the research and development of procedures utilizing electromyography and Non-Invasive Brain Computer Interfaces for an introductory course in cybernetics.
- Worked from March 2021 to June 2021, then March 2023 to June 2023

Digital Technology Intern | General Electric | Schenectady, NY .... **6/2022 – 9/2022**
- Developed multiple systems for automating data analysis pipelines in GE's Gas Power branch.
- Successfully created an automation suite that optimized spending and saved roughly $1.2 Million in costs.
- Reported on several internal vulnerabilities, ensuring the security of the digital infrastructure for over 50,000 users.
- Utilized and further developed skills in Software Engineering, Signal Processing, Cloud Infrastructure and Architecture, Agile Software Development, DevOps, Financial Analytics, Data Analytics, AWS Lambda, Database Technologies, Task and Workflow Automation, Django, Data Science Web Applications, UI Development, and Programming Skills.

Student Research Assistant | Union College CAMLab | Schenectady, NY.. **9/2021 – 6/2022**
- Utilized Data Science methods for large datasets from several independent research projects in Behavioral Psychology Research regarding Creativity and Memory. Significantly reducing analysis time.
- Developed a web application for a remote-capable assessment tool for creativity related to visual tasks.
- Utilized skills in Data Analytics, Research Methods in Psychology, Web Development, Task Automation, JavaScript.

Content and Video Producer | The BCI Guys | Remote .... **10/2020 – 3/2021**
- Contributed to the research and content writing as well as the video production of the Foundations in Neurotechnology course with the most successful videos achieving 12,000+ views and the associated channel achieving 6,000+ subscribers.
- Utilized and expanded upon skills with Adobe Premiere, Scientific Communication.

Student Technician | Union College ITS | Schenectady, NY .... 9/2019 – 3/2021
- Provided technical assistance to students and faculty at Union College through the IT Services Department.
- Solved over 80 user issues related to software/ hardware/ network and technical problems.

Electronics Repair Technician | Mobile Rescue | Larchmont, NY .... 3/2019 – 6/2019
- Repaired Computers and Mobile Devices for customers until the business closed in Summer of 2019.
- Utilized and further developed skills in Customer Service, Windows, MacOS, Linux, Electronics Repair, and troubleshooting.

Research Assistant Intern | The Ro Lab at CUNY | New York, NY .... 6/2018 – 9/2018
- Assisted laboratory staff with equipment, procedures and data analytics regarding Brain Computer Interfaces and psychology applications of EEG.
- Assisted with multiple experiments using TMS equipment and EEG applications for phosphenes stimulation and observation of Alpha activity relating to attention.
- Utilized and further developed skills in Research Methods in Psychology, Electrophysiological data, Trans-cranial Magnetic Stimulation, EEG Setup and Recording, Communication.

Research Assistant Intern | The Gulko Lab at Mount Sinai | New York, NY .... 6/2017 – 9/2017
- Assisted laboratory Staff with equipment and lab procedures regarding Rheumatology, Protein Synthesis, Plasmid Vector Cloning, and Research in Rheumatoid Arthritis.
- Utilized and further developed skills in Research Methods in Molecular Biological Sciences, Laboratory Procedures and Safety, Plasmid Vector Cloning, Gel Electrophoresis, and Polymerase Chain Reaction.

Skills

Web Development: HTML, CSS, JavaScript, NoSQL

Software Development: Java, Python, Agile Development, DevOps, R, JavaScript, C, C++, MATLAB, Scheme, GIT, Docker, Node.js, Assembly, Version Control

Data Science: R, Python, Pandas, Numpy, Scikit-learn, Scipy, Keras, Tableau, MATLAB, Data Visualization

Technical: Artificial Intelligence (AI), Machine Learning (ML) Methods, Technical Writing, Grant Applications, Linux, Unix, MacOS, Windows

Computational Neuroscience Skills: Evoked Potentials Analysis, Digital Signal Processing, Statistical Analysis, Data Collection, Human Subjects Research

Biological Lab Skills: Fluorescence Microscopy, Gel Electrophoresis, Polymerase Chain Reaction, Plasmid Vector Cloning

Electronics Skills: Soldering, Microcontroller Integration, Embedded Systems Design, Electronics Repair

Interpersonal Skills: Project Management, Team Leadership, Proactivity, Negotiation, Interdisciplinary Communication, Flexibility, Consensus Building, Decision Making, Critical Problem Assessment and Problem Solving, Event Planning.

Academic Work

Optimizing an assistive Brain Computer Interface that uses Auditory Attention as Input 2023
Citation
- Ferrisi, Leonardo M., "Optimizing an assistive Brain Computer Interface that uses Auditory Attention as Input" (2023). Honors Theses. 2705. https://digitalworks.union.edu/theses/2705

Description and Achievements
- Completed an Honors Undergraduate Senior Thesis Thesis for both of my majors in Neuroscience and Computer Science in collaboration with the National Center for Adaptive Neurotechnologies.
- Applied for and was awarded a Student Research Grant to provide for transportation and participant compensation costs. In addition, I was also awarded a Student Conference Travel Grant to present my research at the *InterfaceRice* Conference in Houston, TX (May 18-19, 2023).

Involvement

Founder and Chapter Lead of NeurotechALB | NeurotechX .... 10/2023 – Present
- Started NeurotechX Chapter for the NY Capital Region. Planning and organizing Neurotech events for 2024 and beyond.

Member | Union College | Nu Rho Psi National Honors Society .... 5/2022 – Present
- Received Membership for demonstrating results in academic excellence both cumulatively and in Neuroscience.

Founder, Director | Union College | Union Neurotech .... **9/2021 – 6/2023**
- Founded and directed a group of 15 students dedicated to improving access to Biotechnology for research and projects at Union College.
- Hosted around 20 events and enabled 6 independent research projects. Collaborated with 5 schools on projects centered around Neurotechnology.
- Demonstrated and improved upon skills in Team Leadership, Accountability, Open-Source Software and APIs, Machine Learning, Technical Design.

Co - President | Union College | Union Rocketry Club .... **9/2021 – 06/2022**
- Assisted in running the union rocketry club where we exercised concepts in Rocket Science, Physics, and electrical engineering for the design of a rocket for a Class 1 and Class 2 certification.
- Facilitated the design of custom payloads such as on site made electronic payloads for collecting telemetry data.

Treasurer | Union College | Latin American Student Association .... **9/2021 – 12/2021**
- Managed finances and served on the Executive board of the LASO group. Planned and organized Latin American events.

Council Chair | Union College | Beuth House, Minerva Program .... **3/2020 – 3/2022**
- Managed and planned events and activities as the head of a Campus Life program.
- The Union College Minerva Program provides students the opportunities to create and organize events geared towards enriching students and providing a space to find connection, community, and opportunities at Union College.

Awards

Goodnow Neuroscience Endowed Award **2023**
- Awarded annually to the graduating neuroscience student who shows the most promise for success in graduate school and beyond. https://www.union.edu/news/stories/202305/prize-day-winners-2023

Innovative Leadership Award **2023**
- Received recognition for efforts in bringing together many groups to plan events that help to illustrate the benefits and opportunities for Neurotechnology.

Minerva Program of the Year: Union Neurotech: Thinking About U **2023**
- Received Recognition as the best Minerva Program of the year hosted by Union Neurotech, a group I founded and directed.

Most Creative Program: Union Neurotech: Thinking About U **2023**
- Received Recognition as the most creative program of the year hosted by Union Neurotech, a group I founded and directed. This program involved generating abstract art using Brain Activity

Student Research Grant and Travel Grant Recipient **2023**
- Received $1000 in total to support my research on Brain Computer Interfaces and cover travel expenses to present my work.

Dean's List .... **2020 - 2022**
- Received recognition for outstanding academic achievement. https://meritpages.com/LeonardoFerrisi

Nu Rho Psi Member **2022**
- Received Membership for demonstrating exceptional results in academic excellence both cumulatively and in Neuroscience.

Summer Research Fellow **2021**
- Received fellowship for research in Neurofeedback at Union College with Dr. Timothy George.

National Hispanic Recognition Award College Board **2019**
- Recognized for outstanding academic achievement as a member of the Hispanic community.

US Presidential Scholars Nominee **2018**
- Was nominated among 20 other students in my state by a NY assembly member as a candidate for the student representative for NY for the US Presidential Scholars Program.