Connor Finnerty

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SUMMARY

Interdisciplinary scientist-engineer with a background spanning quantum sensing, machine vision, biophysics, and regulated cell therapy manufacturing. Draws on training in neuroscience, hands-on optics and instrumentation, and advanced data science methods to explore how intelligence – human and artificial – interfaces with the material world. Currently leading Nerv Analytica, a solo data science initiative bridging bio, neuro, and machine vision domains. Seeking to contribute to neurotechnology that demands both rigor and imagination.

EXPERIENCE

Principal Data Scientist

Nerv Analytica   August 2024 - Present, Somerville, MA

- Founded a solo data science consultancy to explore applications of ML in biotech, neuroscience, and machine vision.
- Built prototype pipelines for image classification, clustering, and exploratory analysis using TensorFlow and PyTorch.
- Conducted self-directed investigations into public neuroimaging, genomics, and proteomics datasets, including NGS and mass-spec; developed data visualization workflows with Seaborn and Plotly.

Manufacturing Associate – Cell Therapy

Bristol Myers Squibb   December 2022 - June 2023, Devens, MA

- Executed FDA-regulated GMP manufacturing of Breyanzi in a Grade 8 aseptic cleanroom.
- Operated across Make 1 and Make 2 stages; served in Operator and Verifier roles.
- Managed cleanroom workflows, cryogenic transport, and tube sealing systems.
- Used LIMS, MES, DeltaV, and SAP for tracking and environmental data.

Process Development Technician – Genomics Platform

Broad Institute   December 2021 - May 2022, Cambridge, MA

- Handled BSL2+ COVID-19 diagnostic workflows including plating, RT-PCR, and QC.
- Performed sample accessioning and swab integrity checks to ensure compatibility with high-throughput processing systems.
- Contributed to predictive modeling using wastewater data and flagged protocol deviations using JIRA to support lab compliance and performance.

Research Associate

Information Sciences Institute, USC   December 2019 - October 2021, Waltham, MA

- Contributed to a DARPA-funded research initiative developing optical systems for off-axis Mie scattering detection using SWIR/NIR lasers.
- Designed and automated experimental acquisition pipelines and collaborated on CNN-based image analysis for beam path localization.
- Co-authored a peer-reviewed publication for SPIE 2021 and received formal credit in a follow-up Optica publication.

Research Assistant – Walsworth Group

Harvard University   April 2019 - December 2019, Cambridge, MA

- Developed NV^- diamond magnetometers for imaging neural/cardiac fields.
- Automated LabVIEW/MATLAB protocols and fabricated microfluidic systems.
- Acknowledged in Phys. Rev. B 100, 174103.

Research Assistant – Visual Learning Lab

Harvard-Smithsonian Center for Astrophysics   May 2013 - August 2014, Cambridge, MA

- Conducted EEG/ERP and eye-tracking studies on adolescent reading cognition.
- Presented findings at Landmark College and contributed to media coverage.

EDUCATION

Data Science & AI Bootcamp

General Assembly · Boston, MA · May 2024 – Aug 2024
• Python, R, Scikit-learn, TensorFlow, Keras, SQL, Spark, Tableau, PyTorch.

B.Sc. in Neuroscience; Minor in Biology

Minor in Biology · University of Massachusetts Amherst · Amherst, MA · 2013 · 3.5
• Relevant coursework: Psychopharmacology, Programming in Neuroscience, Bioinformatics.

INVOLVEMENT

Private Tutor

Somerville, MA · Nerv Analytica · January 2025 – Present
• Provided individualized academic support for high school and university students in STEM subjects , History, and SAT/ACT Prep .

Support for Dr. Ehsan Hoque

Distressed Children International · 2019– Ongoing
• Support a humanitarian foundation rescuing children from indentured labor in Bangladesh.
• Assist founder, a visually impaired cardiologist, in operations, communications, and logistical tasks across education and health outreach
  programs.

Certified Pharmacy Technician

Boston, MA · CVS / Massachusetts General Hospital · July 2015 – July 2016
• Assisted with prescription processing, inventory control, and patient care in high-volume clinical pharmacy setting.

Mobile Dental Van Initiative

San Felipe, DR · Rotary Club (Stow, MA) · January 2011 – December 2015
• Collaborated with sister club in San Felipe, DR, and Dr.
• Frantz Compere to retrofit an ambulance into a mobile pediatric dental unit.
• Assisted with construction, electrical outfitting, medical supply collection, and in-person international coordination to facilitate donation
  compliance and delivery.

Research Assistant / Editor - Dr. Wanda Díaz-Merced

Cambridge, MA · Harvard-Smithsonian Center for Astrophysics · January 2014 - August 2014
• Supported academic writing, grant submissions, and cross-disciplinary communication for blind astrophysicist focused on sonification and
  inclusive science.

SKILLS

Programming & Data Science: Python, R, SQL, C, MATLAB

Machine Learning & AI: PyTorch, TensorFlow, Keras, Scikit-learn

Visualization & Dashboards: Tableau, Seaborn, Plotly, Streamlit

Scientific Tools & Platforms: LabVIEW, GitHub, Adobe Creative Suite

Cloud & Infrastructure: LIMS, MES, DeltaV, SAP, JIRA, PySpark, Polars

Experimental & Wet-Lab Techniques: NV-diamond magnetometry, EEG/ERP, qPCR, electrophysiology, biophysics, cleanroom fabrication, microfluidics, flo cytometry, Next- Gen Sequencing, ELISA, iPSC incubation and handling

Biotech & Regulatory: GMP, GxP, ALCOA, Grade 8 pipetting, cryopreservation, cell culture

Soft Skills & Operations: Technical writing, cross-cultural collaboration, training and SOP development