VICTORIA MCCRAY

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PROFESSIONAL SUMMARY

AI & Data Scientist with an MSc in Bioinformatics and five years developing statistical and machine learning solutions across biotechnology, medical and wearable devices, public health, and healthcare. Experience analyzing neuroimaging and network connectivity, clinical and epidemiological surveillance data, behavioral and cognitive assessments, genomic sequences, product usage patterns, and pharmacological outcomes. Expertise applying Python, R, and cloud platforms (Databricks, Snowflake, Azure) to extract insights from complex, high-dimensional biological data. Recognized for technical documentation, cross-sector collaboration, and building open science capacity in resource-limited settings.

PUBLICATIONS & PRESENTATIONS

McCray, V.P., Dukes, A., Pittman, Nikea. Community-Driven Programming to Strengthen STEM Conference Experiences: A First Look at BlackInNeuro and BlackInMicro Event Outcomes. Oxford Open Neuro. (in press, 2026).

Dukes, A., Murray, D., Kelly, C., Greenwood, P., **McCray, V.,** Tesfaye, R., Dominguez, E., & Liu, C. (November 2023) How I Survived Grad School: Perspectives from Black In Neuro. Professional Development Workshop. Society for Neuroscience 2023. Washington D.C., USA.

McCray, V. (April 2022) Effects of Cannabis for Persons with Schizophrenia: Implications for Reward Processing. Research, Innovation, and Scholarship (RISE) Expo Poster Session. Boston, MA.

Contributor. Centers for Disease Control and Prevention. Drug Overdose Surveillance and Epidemiology Discharge Surveillance (DOSE-DIS) System: Nonfatal Overdose Emergency Department and Inpatient Hospitalization Discharge Data. US Department of Health and Human Services, CDC; [2024]. Access at: https://www.cdc.gov/overdose-prevention/data-research/facts-stats/dose-dashboard-nonfatal-discharge-data.html

EDUCATION

Master of Science in Bioinformatics
Northeastern University, Boston, MA
Focus Interests: neuroimaging and biomedical data science, bioinformatics pipelines, ML evaluation

Bachelor of Science in Psychology (Honors), Minor in Data Science
Northeastern University, Boston, MA
Honors Thesis: McCray, V. P. (2022). Effects of cannabis for persons with schizophrenia: implications for reward processing. Library Repository; Northeastern University. http://hdl.handle.net/2047/D20439370

TECHNICAL SKILLS

AI & ML: Python/PySpark, R, scikit-learn, XGBoost, random forest, OpenAI API, LLM applications, prompt engineering, statistical modeling, RAG systems
Cloud & Compute Platforms: Azure Databricks, Snowflake, Azure AI Foundry, GitHub, Microsoft SQL Server
Visualization & BI: Power BI, Power Platform, Plotly, ggplot2
Domain Expertise: public health, bioinformatics, epidemiology, computational neuroscience, biomedical data science, health equity analytics

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PROFESSIONAL EXPERIENCE

AI & Data Scientist II | Guidehouse (Supporting the CDC) | Atlanta, GA | Feb 2024–May 2026
• Led, delivered and maintained reproducible AI/ML workflows that improved program analysis efficiency, accuracy, and interpretability for large multi-year national public health initiatives
• Led responsible AI adoption strategy by developing informational assets, curriculum, use cases, and governance best practices for executive and C-suite organization leaders
• Designed and deployed transformer-based recommendation system using OpenAI API for automated analysis and ranking of grant opportunities, reducing manual research from 8 hours to 15 minutes weekly
• Architected enterprise data infrastructure processing 11M+ records for national overdose surveillance (PySpark/Databricks), reducing validation time 50% and enabling real-time public health response across 54 jurisdictions' emergency departments
• Established technical standards as Python/R SME, implementing Git workflows and code review processes that reduced production QA time 40%
• Conducted real-world evidence research of patient cohorts for immunotherapies and chronic conditions using insurance claims and EHR databases, which characterized treatment patterns for pharmaceutical analytics (Snowflake & SQL)
• Built predictive geospatial models with cross-functional team of epidemiologists and neurologists, identifying high-risk communities to inform state-level resource allocation strategies
• Designed and formatted 15+ data visualizations for two peer-reviewed scientific manuscripts disseminating national Parkinson's Disease and Multiple Sclerosis mortality and prevalence estimates using clinical surveillance data

Lead Facilitator and Founder | Open Science Neuro Hackathon |Lilongwe, Malawi | February 2025
Collaborators: Reality Labs at Meta, African Brain Data Network, Black In Neuro, TReND in Africa, Lilongwe University of Agriculture and Natural Resources, Learning & Brain Development Lab at NEU
• Founded international neuroimaging and data science program teaching Python and computational neuroscience methods to 30+ graduate students and faculty, democratizing research tools in resource-limited settings

• Facilitated curriculum on biomedical imaging AI including medical image classification, tumor detection from sMRI scans, and deep learning approaches for diagnostic imaging using convolutional neural networks
• Contributed documentation improvements to nilearn, an open-source Python library for neuroimaging analysis, supporting broader accessibility of computational neuroscience tools

UX Researcher/Data Analyst | Autodesk | Remote | Feb 2022– April 2023
• Designed product usage analytics framework (Looker, Qualtrics XM) identifying high-value user segments and feature adoption patterns presented to product leadership
• Led advanced analytics on 1M+ survey responses using NLP and statistical modeling (regression, clustering), extracting insights that directly influenced product roadmap and feature prioritization

Director of Finance | Black In Neuro | Remote | 2023–2026
Previously: Reporting and Finance Lead (2021–2023)
• Direct financial planning and impact reporting for international nonprofit supporting Black neuroscientists across 40+ countries with $150K annual funding portfolio
• Increased funding diversification 35% through donor tracking system, in-kind support and strategic sponsor outreach yearly average from 2023 to 2025

Research Fellow | Learning and Brain Development Lab, Northeastern University | Boston, MA | Sep 2021– May 2022
• Conducted behavioral and network analysis of brain connectivity patterns in clinical datasets using Python, R, and CONN packages for functional connectivity analysis
• Performed statistical analyses including hypothesis testing, ANOVA, and regression to investigate cognitive and neurological development in psychiatric populations
• Collaborated with precision medicine scientists and presented research findings at RISE conference
• Developed computational pipelines for processing and analyzing fMRI data from clinical datasets

UX Researcher | Insulet Corporation | Billerica, MA | Jan 2021 – Jun 2021
• Designed and analyzed A/B tests for wearable medical device controller app, conducting formative and summative user research to improve device outcomes and user experience
• Managed full research lifecycle including recruiting, study planning, statistical analysis, and analytics for moderated usability studies leveraging Qualtrics platform