Martin Nwadiugwu, PhD

Contact

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- LinkedIn

Career Profile

Summary:

Cross-functional leader with over 8 years of expertise in biomedical informatics, computational analysis and aging.

Objectives:

I am a biomedical informatics scientist with a PhD from Tulane University School of Medicine, where my research focused on using multiomics, drug repurposing and machine learning approaches to understand cognitive decline in aging populations, especially in relation to Alzheimerâ€™s Disease. I have had quite an academic journey, with degrees in Anatomy, Computer Science, Gerontology, and Biomedical Informatics.

In addition to my roles as a teacher and researcher, I have previously worked as a Field Application Scientist at L7 Informatics. In my free time, I enjoy playing chess, guitar, and table tennis.

Education

Aug 2022 - May 2026
Tulane University, PhD in Biomedical Informatics and Genomics

PhD in Biomedical Informatics and Genomics.

I joined the Deng lab at Tulane School of Medicine in the Fall of 2022 to study Alzheimerâ€™s disease using singleâ€˜cell RNA-seq data, molecular odcking, molecular dynamics simulation and machine learning. I received the National Institute on Aging (NIA) subaward grant (A2 Pilot Grant from the Johns Hopkins AITC) as Principal Investigator; and have over 17 firstâ€˜author papers. I also hold a Masterâ€™s degree in Biomedical Informatics from the University of Nebraska Omaha, and a Masters in Aging and Gerontology from both the University of Stirling and University of Southern California. I have worked in the industry as a Field Application Scientist at L7 Informatics.

Aug 2019 - Dec 2020
University of Nebraska at Omaha, MSc in Biomedical Informatics

MSc. Biomedical Informatics

Aug 2019 - May 2024
University of Southern California, MA in Aging Services Management

Master of Arts - MA, Aging Services Management

Sep 2018 - Nov 2020
University of Stirling, MSc in Global Issues in Gerontology and Ageing

Masters of Science, Global Issues in Gerontology and Ageing

Nov 2011 - Jan 2016
University of the People, Bachelors in Computer Science

Bachelors in Computer Science

Oct 2011 - Oct 2015
University of Ilorin, BSc in Anatomy

Work Experience

Jul 2026 - Current

Research Scientist I

Tulane University School of Medicine, New Orleans

â€´ Conducted biomedical informatics and genomics research using single-cell and multi-omics datasets.
â€´ Developed machine learning and bioinformatics pipelines for Alzheimerâ€™s disease prediction.
â€´ Built, validated and deployed predictive models integrating genomic, clinical, and cognitive data across external cohorts.
â€´ Performed statistical analysis, data visualization, and interpretation using HPC, Python and R.
â€´ Collaborated on interdisciplinary research and grant-related activities.
â€´ Prepared scientific abstracts, posters, manuscripts, and presentations for dissemination of findings
Jun 2026 - Current

Health Informatics Researcher

Ochsner Health, New Orleans
â€´ Develop IRB protocols and lead machine learning and health informatics studies integrating genomic, clinical, and EHR-derived datasets for cerebral amyloid angiopathy (CAA) and neuroscience research.
â€´ Applied advanced statistical analysis and predictive modeling to identify clinically relevant biomarkers.
â€´ Collaborate with interdisciplinary faculty, clinicians and trainees to support cerebral amyloid angiopathy research.
Jan 2026 - Jun 2026

AI Fellow, Connolly Alexander Institute for Data Science

Tulane University, New Orleans

â€´ Led the development of AI video annotation system using LLMs, Azure Speech, Azure Search, Azure OpenAI, Search Function and Azure Blob storage
â€´ Employed RAG in public health cadiovascular research tool for locals
â€´ Video annotation project can be found on Github (https://github.com/martintony4all/video-annotator)
Aug 2024 - Aug 2025

Program Assistant (Academic Learning & Tutoring Center)

Tulane University, New Orleans
â€´ Supported program development and implementation leading to Level I Certification from the College Reading & Learning Association
â€´ Mentored over 40 tutors, including tracking attendance, generating weekly reports, and maintaining strike summaries, ensuring 100% accuracy in documentation.
â€´ Graded over 30 weekly reports, created one-on-one session summaries and provided detailed feedback that contributed to improvement in tutor performance.
â€´ Facilitated over 50 makeup sessions for missed meetings both remotely and in-person, to ensure 100% participation for required biweekly meetings.
â€´ Organized and led biweekly meetings for ~40 tutors, providing feedback and maintaining high engagement levels.
â€´ Assisted in recruitment by conducting interviews, contributing to over 25% growth in the tutoring team.
â€´ Promoted tutoring services through advertising campaigns that increased student engagement.
Aug 2022 - May 2026

Bioinformatics Doctoral Researcher

Tulane University, New Orleans
â€´ Built and deployed scalable pipelines supporting transcriptomic workflows to predict Alzheimerâ€™s cases
â€´ Awarded NIA supported A2 Pilot Grant as Principal Investigator to lead a project identifying regulators and druggable targets in Alzheimerâ€™s disease.
â€´ Led single cell (snRNA-seq), molecular docking and dynamic simulation to repurpose Alzheimerâ€™s disease drugs
â€´ Executed computational analyses on large biomedical datasets, adapting methodologies to deliver insights
â€´ Managed NIH grant application, streamlining collaboration and budget processes to reduce admin overhead
â€´ Awarded AIM-AHEAD Track 1 grant to study FHIR in healthcare settings
â€´ Directed a team of 5 to develop a research strategy on multiomics NIH grant, achieving 100% on-time delivery
â€´ Transformed complex genomic data into strategic insights, resulting in over 15 published first-author papers.
â€´ Supervised and mentored over 30 graduates and 6 undergraduate students, saving 100+ staff hours per session
â€´ Collaborated with cross-functional teams to refine roadmaps for research with evolving academic needs
â€´ Obtained Level I-III Clinical Research Coordinator Training (FDA & ICH regulations, Drug development regulations) from Tulane Center for Clinical Research (TCCR)
Jul 2021 - Jul 2022

Field Application Scientist

L7 informatics, Remote, United States
â€´ Automated software systems to manage accessioning for NGS workflow, reducing client downtime and streamlining work procedures while ensuring alignment with evolving market demands and customer expectations
â€´ Headed enterprise software implementations for projects over $300K, delivering 100+ scientific deployments
â€´ Supported bioinformatics pipelines deployed across AWS and onâ€˜prem HPC environments, including storage, compute orchestration, and access controls
â€´ Achieved an 8000% growth surge by optimizing content and developing customer success stories
â€´ Orchestrated integration of bioinformatics pipelines for LIMS deployment in 4 labs and 3 diagnostics companies
â€´ Standardized documentation procedures, slashed product turnaround by 50% and created 10+ performance reports
â€´ Integrated agile methodologies and Scrum practices to refine product development processes for timely delivery
Sep 2019 - Dec 2020

Researcher (Biomedical Informatics)

University of Nebraska at Omaha , Omaha
â€´ Directed analytics on electronic health records data from 40,000 patients to identify disease outcomes for diabetes
â€´ Conducted gene expression analysis (bulk RNA-seq) for cancer and aging studies, resulting in 2 publications

â€´ Established 6+ national and international collaborations to survey HIT applications
â€´ Leveraged research to shape technology plans and product strategy for health informatics tools
â€´ Experience working with standards such as FHIR, SNOMED, HL7
May 2019 - Sep 2019

Information Technology Technical Support

LACVIS,
â€´ Executed preventive and corrective maintenance on IT systems, reducing downtime by over 50% through prompt resolution of technical issues
â€´ Installed, configured, and maintained computers and databases for optimal performance, while identifying and resolving back-end technical support issues

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Organizations

Aug 2024 - Aug 2025

Program Assistant

Tulane University
Aug 2022 - May 2026

Biomedical Informatics Scientist

Tulane University
Jul 2021 - Jul 2022

Field Applications Scientist

L7 Informatics
Sep 2019 - Dec 2020

Researcher (Biomedical Informatics)

University of Nebraska Omaha
May 2019 - Sep 2019

Information Technology Technical Support

LACVIS

Skills & Proficiency

Agile Software Development

AI Engineering

Azure

Bulk RNA-seq

Cloud computing

Git

HPC

Jira

Machine Learning

Mentoring

Project Management

Python

R

RAG

RNA-seq analysis

Single cell analysis

Slurm

SQL

Statistical Machine Learning

Teaching

Other

Interests:

- Alzheimerâ€™s Disease
- Cerebral Amyloid Angiopathy
- Drug repurposing
- Electronic Health Records
- Genomics
- Machine learning
- Molecular docking
- Neuroimaging Research
- Neuroimaging Research
- Single cell RNA Seq
- Transcriptomics