**Loni Taylor, MS, PMP, CETL**

3401 West End Ave, Suite # 260, Nashville, TN-37203

[lotaylor23@mmc.edu](mailto:lotaylor23@mmc.edu) | 281-785-3962  
[Cybersecurity SIG](https://sacsmeharry.org/sacs/students/cybersecurity-club/) | [Pages](https://sites.google.com/view/uttamghosh/students) | [Github](https://github.com/lotaylor23/) | [DISCS Lab](https://sacsmeharry.org/sacs/research/labs/discs-lab/)

ORCID: 0009-0008-4543-2815  
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**Current Position**

**Data Analysis Manager**  
Alief Independent School District, Houston, TX  
2021 – Present

**Education**

PhD (ABD), Biomedical Data Sciences  
*Meharry Medical College*, Nashville, TN  
2026 (expected), GPA: 3.97

M.S., Computer Science  
*Texas Southern University*, Houston, TX  
2015, GPA: 3.5

B.S., Computer Science  
*Grambling State University*, Grambling, LA  
2010, GPA: 2.85

**Professional Certifications & Technical Training**

* **Project Management Professional (PMP)**
* **Certified Education Technology Leader (CETL)**
* Google Certified Educator
* ITIL Foundations
* Certified Ethical Hacker
* Cisco Certified Network Associate (CCNA)
* Cloud Computing (IBM)
* DevOps, SQL Server, Power BI
* ServiceNow (Certified Admin, ITSM, Security Admin)

**Professional Positions and Experience**

**Data Analysis Manager**  
*Alief ISD*, Houston, TX  
2021 – Present

* Led a team of analysts to deliver predictive models and AI-enhanced dashboards for educational systems.
* Integrated machine learning algorithms into district analytics workflows.
* Guided executive data strategy and visualization to align analytics with policy compliance and state performance frameworks.

**Senior Programmer**  
*Spring ISD*, Houston, TX  
2017 – 2021

* Designed advanced data pipelines and robust ETL frameworks.
* Spearheaded back-end integration with API and database services to support scalable enterprise apps.
* Designed and implemented complex software solutions for data management and analysis, leading to a 30% reduction in processing time.
* Provided mentorship and technical guidance to junior programmers, fostering skill development and knowledge transfer.
* Directed full software development lifecycle, from requirements gathering to deployment and maintenance.

**Technology Manager / Instructor**  
*Harmony School of Discovery*, Houston, TX  
2015 – 2017

* Directed cross-functional deployment of systems aligned with institutional KPIs.
* Introduced tactical robotics and analytics curriculum focused on practical simulation and smart systems.
* Directed technology initiatives and managed a portfolio of projects in deference to school budget.
* Taught undergraduate and high school level courses in analysis, robotics, athletics, programming, and technology management.
* Developed curriculum and instructional materials that enhanced student learning and engagement.
* Directed research on emerging technologies and data analysis methodologies.

**Systems Administrator**  
*Rosenberg CMHC*, Sugarland, TX  
2014 – 2015

* Directed implementation of enterprise-wide IT infrastructure with embedded cybersecurity protocols.
* Performed audits and risk analysis aligned with compliance standards.
* Directed a team of IT professionals to ensure system reliability, security, and performance.
* Streamlined system operations, resulting in a 15% decrease in system downtime and a 20% increase in user satisfaction.

**User Services Analyst**  
*Texas Southern University*, Houston, TX  
2011 – 2014

* Administered helpdesk operations, faculty tech onboarding, and cloud-based service integration.
* Initiated early-stage EdTech partnerships and analytics infrastructure.
* Oversaw user support operations, ensuring high levels of service and support for internal and external clients.
* Implemented user feedback mechanisms to continuously improve service quality and resolve issues effectively.
* Developed training programs and materials to enhance user knowledge and system utilization.

**Data Entry/Transaction Specialist**  
*PreCash, Inc*, Houston, TX  
2011

* Accurately entered and maintained data in various systems, contributing to the integrity and reliability of data used for analysis.
* Performed data validation and cleanup to ensure accuracy and consistency across databases.
* Assisted in the development of data entry procedures and best practices to improve efficiency.

**Wireless Sensors Research Programmer**  
*Jackson State University*, Jackson, MS  
2010 – 2011

* Developed field-tested simulations of wireless networks and machine learning-enhanced sensor protocols for mission-specific environments.
* Built digital twin simulations for deployment modeling and optimization.
* Built simulation to model and display multiple saving techniques on randomized event profiles.

**Patient Services Coordinator**  
*Doubletree Residential*, Austin, TX  
2009 – 2010

* Coordinated patient services and managed scheduling, optimizing patient flow and satisfaction.
* Implemented new processes to streamline patient interactions and enhance service delivery.
* Ensured compliance to client relations policies through daily monitoring of employee operations.
* Created governance metrics, KPI’s and maintained consistent improvement in profit/loss margins.

**Asset Management Analyst / Network Tools Analyst**  
*Caterpillar, Inc.*, Mossville & Peoria, IL  
2007 – 2008

* Led asset tracking for enterprise systems with full lifecycle management.
* Managed global network performance tools and wrote scripts for database migration.
* Applied InfoSec protocols to manage infrastructure security and operational resiliency.
* Collaborated with facilitator to direct onboarding for rotational development program of engineers.
* Managed and maintained administration of corporate online service desk system for US region.
* Scripted complete network migration of global company database.

**Business Analyst**  
*Grambling State University*, Grambling, LA  
2005 – 2007

* Designed data governance frameworks for administrative units; maintained compliance with university policy.
* Analyzed business processes and identified opportunities for improvement.
* Collaborated with stakeholders to develop and implement solutions that enhanced business operations.
* Maintained tracking and request systems, ensuring high availability and reliability.
* Analyzed traffic and performance data to optimize procedures and troubleshoot issues.

**Research Interests**

Applied Cybersecurity | Tactical AI & Autonomy | Secure Cloud & Edge Systems  
Bioinformatics & Healthcare Analytics | Human-Machine Teaming | Predictive Modeling  
AI/ML for DoD and Federated Systems | Smart Networks & Infrastructure Optimization

Multimodal Technology | Data Visualization | Precision Medicine | Computational Neuroscience

**Publications**

* **Taylor, L.** (2010). *Random Edge-Disjoint Minimum Spanning Tree Data Gathering Algorithms*. NSF REU 2010.
* **Taylor, L.,** Gibbs, G., Sarker, B. (2023). *Race and Risk: A Bioinformatic Analysis of Alzheimer’s Disease*. BMC Proceedings.
* **Taylor, L.,** Gupta, V., Jung, K. (2024). *Visualization and ML Techniques in Education: A State Assessment Case Study*. Multimodal Technologies & Interaction.
* Sandoval, G., Mendales, E., **Taylor, L.,** Gibbs, G., Sarker, B. (2025). *Copy Number Variant Effect Prediction Pipeline*. CompBioAsia 2025.
* Chen, Y., Vazquez, J., **Taylor, L.,** Xue, X., Farnsworth, M., Araya, K., Hasan, M. (2025). *Predicting Hospital Outcomes in Acute Respiratory Infection during a Global Health Crisis: A Machine Learning Analysis of the N3C Cohort*. AIM-AHEAD Annual Conference 2025.

**Research Grants & Fellowships**

* NSF CompBioAsia 2025 Fellow – 2025
* Harvard CDHI/DOE EDF Fellowship – 2025
* AimAhead NCATS Fellowship – 2025
* Novartis HBCU Graduate Scholarship – 2024
* SACS General Research Scholar – 2022–Present

**Professional Affiliations**

* Member, IEEE
* Member, Project Management Institute (PMI)
* Member, Consortium for School Networking (CoSN)
* Member, DataCamp

**Select Invited Talks, Hackathons & Leadership Activities**

* *Invent Boldly: HBCU Pathways to Innovation*, 2025 InventEd Convening– Lead, 2025
* President, Meharry Cybersecurity Interest Group, 2025
* President, IEEE Branch Chapter, 2025
* President, Women in Cybersecurity Interest Group, 2025
* *EcoPredictML* – Mentor, MS-CC Summer Research, 2025
* *Introduction to Python and AI* – Instructor, MS-CC & ODU, 2025
* *CyberXpert Academy*: *Python for Cybersecurity* – Instructor, MS-CC & ODU, 2025
* *An Exploratory Analysis of Alzheimer’s Disease to Elucidate Link Between Race to Risk* – 69th Meharry Annual Research Day, 2025
* *AI & Responsible LLMs*, Vista GenAI Hackathon – Team Member, 2024
* *U2rUs – Women’s Health Solution*, WWCode Hackathon – Solutions Architect, 2023
* *Multiomics via Graph ML*, ISCB-Africa ASBCB – Tutorial Lead, 2025
* Computing Research for Complex Networks (CRCN)-Crest
* Role and Responsibilities: Instruction, training and development of young students (ages 12-18) interested
* in augmenting their secondary education, vex robotics instructor, coordinate student activities, manage
* parent relations with staff and volunteers, coordinate program development activities.
* Duration of Participation: Summer 2012
* Leadership Position(s) Held: Instructor, Youth Activities Administrator
* Name of Activity: Texas Southern University-Computing Research Association for Women(CRA-W)
* Role and Responsibilities: Attend reviews and reports on works undertaken by peers in computing,
* participate in industry/career growth workshops, participate in meet and greet of candidates and invitees
* to annual events, foster goodwill and positive publicity for collaborative initiatives.
* Duration of Participation: Spring 2012, Spring 2013
* Leadership Position(s) Held: Invitee-Campus Representative
* *Introduction to Robotics,* Computing Research for Complex Networks (CRCN)-Crest – Instructor, Youth Activities Administrator, 2012
* Ambassador, Texas Southern University-Computing Research Association for Women(CRA-W), 2012-2013
* *Predictor-Corrector Methods & ETFs* – Co-Presenter, Texas Southern University-CRCN Crest Symposium, 2011
* *Reactive Boundary Simulations in Visual Python* – Philip Young Symposium, 2010.
* Representative, Caterpillar 2007 Circle City Classic (CCC), 2007
* Women’s Track and Field Representative, Student Athlete Advisory Committee, 2005-2010

**Select Teaching Experience**

**Flight International Track**  
2005–2009  
Coaching:

* Athletic Leadership & Cognitive Analysis
* 6-18 USATF & AAU Track and Field

**Ruston Parks and Recreation**  
2010–2011  
Coaching:

* Athletic Leadership & Cognitive Analysis
* 6-12 Soccer

**Texas Southern University**  
2011–2014  
Courses:

* Robotics and Intelligent Systems
* Computer Science Foundations
* Computer Applications
* Advanced Programming Techniques
* Name of Activity: Southwestern Athletic Girls Basketball-Alief ISD
* Role and Responsibilities: Train and develop young athletes interested in high school basketball
* (freshman), manage parent relations with staff and volunteers.
* Duration of Participation: Summer 2015
* Leadership Position(s) Held: Basketball Coach

**Southwestern Athletic Girls Basketball-Alief ISD**   
2014–2015  
Coaching:

* Athletic Leadership & Cognitive Analysis
* High school basketball

**Girls Basketball-Yes Prep Southwest**   
2015–2016  
Coaching:

* Athletic Leadership & Cognitive Analysis
* Middle school basketball

**Harmony School of Discovery**  
2015–2017  
Courses:

* Robotics and Intelligent Systems
* Computer Science Foundations
* Computer Applications
* Journalism
* UIL Basketball/Volleyball

**Mentorship and Supervision**

* Assisted in mentorship of a Masters student on the Thesis titled “Fall Detection in Indoor Environments Using Classical Machine Learning and Motion-Based Human Activity Recognition” at Meharry Medical College, Nashville, TN.
* Assisted in mentorship of a Masters student on the Thesis titled “A Modernized Database and Integrated Communication Platform for Improving School Safety” at Meharry Medical College, Nashville, TN.
* Co-Mentor in the MS-CC Internship Program for Undergraduates under “Sustainability and Ecosystem Disruption” which utilizes Machine Learning to analyze Ecological Disruptions and related effects in Species Distribution joint hosted by Meharry Medical College and Fisk University in Nashville, TN.

**Computer & Technical Skills**

**Languages**: Python, R, Java, Julia, HTML, Visual Basic, SQL, MySQL, Batch, C++  
**Frameworks/Tools**: TensorFlow, Scikit-learn, Spark, Tableau, Pandas, NumPy, scipy, Tensorflow, Keras, Streamlit  
**Cybersecurity**: ITIL, ServiceNow Security, Cisco/CCNA, IAM/Access Control  
**DevOps**: GitHub, CI/CD pipelines, API integration, VMware  
**Big Data**: Spark, ETL Pipelines, Cloud-Based Storage (AWS, IBM Cloud)

**Operating System:** Windows, Linux

**Other Tools:** GitHub, Microsoft Office Tools, LaTeX, SPSS, Cognos

**Databases:** MySQL, NoSQL, MongoDB, MSSQL  
**Visualization**: Matplotlib, Power BI, Tableau, Origin

**Honors & Awards**

* CompbioAsia 2025, NSF Applied Technology Immersion Camp, 2025
* EDF & MMC Fellows, Harvard Partnership with CDHI & DOE, 2025
* AimAhead NCATS Fellowship, 2025
* NSF I-Corps Mid-South Awardee, 2025
* Novartis HBCU Graduate Scholarship, 2024
* SACS General Scholarship, Meharry Medical College, 2022-present
* Mobile CSP Program, 2016
* Texas Southern University Teaching Assistantship, 2011
* Caterpillar Excellence Scholarship, Caterpillar Inc., 2008
* Student Athlete Advisory Committee Scholarship, NCAA, 2009-2010
* NCAA Division I Track Scholarship, Grambling State University, 2005-2009
* AAABSE Academic Scholarship, Austin Area Alliance of Black School Educators, 2005

**Professional Service**

* Supplemental Support and Departmental Tutor – CASA, 2024-present
* Mentor & Technical Advisor – MS-CC National Research Programs
* Lead Developer – Inclusive Growth x AUC Data Challenge, 2024
* IP Business Team – Fall 2024 Scipreneur Challenge
* CRA-W Campus Rep – 2012–2013
* ACM Chapter Officer – Grambling State University, 2009–2010