

Abdoulay Lashley

(301) 412-0932 • abdoulay.lashley@gmail.com • [linkedin.com/in/abdoulay-lashley/](https://www.linkedin.com/in/abdoulay-lashley/)

EDUCATION

University of Maryland, Robert H. Smith School of Business

Master of Science in Information Systems, GPA: 3.6

- **Relevant Coursework:** Data Mining & Predictive Analytics, Designing Generative AI Systems, AI for Business Applications, Data Processing, Analysis & Modeling, Database Management, Causal Inference & A/B Testing, Data Visualization, Cloud Computing, Project Management, Industry Practicum
- **Terrapin Scholar** – University of Maryland, 2024–2025
- **Dean’s List** – 2020–2021, 2022–2023, 2024–2025

College Park, Maryland

August 2024 – December 2025

University of Maryland, A. James Clark School of Engineering

Bachelor of Science in Bioengineering, GPA: 3.2

College Park, Maryland

August 2018 – May 2023

TECHNICAL SKILLS

<p>Programming & Data Engineering: Python, SQL, JavaScript, JSON, Spark, PySpark MLlib, Hadoop, Hive, MapReduce, Node.js, Express.js, Data Wrangling, REST APIs</p> <p>Machine Learning & AI Applications: AI/ML, NLP, LLMs, OpenAI API, Scikit-learn, Pandas, Seaborn, Regression & Classification, Cluster Analysis, Model Evaluation, Ethical AI Practices</p> <p>Databases & Cloud Technologies: AWS, Azure, GCP, MySQL, NoSQL, MongoDB, Neo4J, Snowflake, BigQuery, Data Lakes & Pipelines</p>	<p>Business Intelligence & Visualization: Power BI, Tableau, React.js, Leaflet.js, Google Analytics, Dashboard Development, Data Storytelling</p> <p>Project & Product Management: Agile, SCRUM, JIRA, Confluence, Risk Management, QA Oversight, Product Roadmapping, Microsoft Project, Figma (UX/UI Design)</p> <p>Software & Tools: SAP, ETQ, Flexnet, Solvace, VSCode, Git/GitHub, Microsoft Office, Google Workspace, AutoDesk Fusion 360, AutoCAD, SolidWorks, Lucidchart, Apache Kafka, Sqoop, Spark GraphFrames</p>	<p>Biotechnology & Laboratory Techniques: Imaging & Microscopy (Electron, Fluorescent), Chromatography (HPLC, GC, TLC), Gel Electrophoresis, ELISA, DNA Extraction & Purification, CRISPR Gene Editing, Rheology, Bacterial & Mammalian Cell Culture, Organic & Inorganic Synthesis, Titration, Extraction, Distillation (Standard & Vacuum), Solubility Testing</p> <p>Computational Biology & Data Analysis: Python, MATLAB, R, Jupyter, Biostatistics, Data Visualization, Signal Processing, VMD, Mathematica, GUI Development, Statistical Modeling, Experimental Design</p> <p>Manufacturing & Quality Systems: cGMP & GDP Compliance, Equipment Validation & Testing, Process Optimization, SOP Development, Quality Assurance & Reporting, Regulatory & Materials Management, Cross-Functional Collaboration</p>
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WORK EXPERIENCE

L’Oréal USA

Industrial Quality CO-OP – *Product Launch, Data Visualization & Analysis, Process Improvement*

- **Designed and rolled out** eCLAIR digital product, building consensus across QA, operators, and engineering teams, **reducing micro-contamination incidents by 20%**.
- **Digitized 25 production forms, streamlining accessibility** for line operators and **reducing documentation errors by 30%**, enhancing operational efficiency and regulatory compliance.
- **Built** Power BI dashboards that **boosted efficiency by 15%** and **cut downtime by 10%**, presenting insights to **senior leadership** to align stakeholders on data-driven decisions.

Somerset, New Jersey

June 2023 – August 2024

PROJECT EXPERIENCE

Veteran Sentiment Analysis Platform – *Deloitte GPS | AWS, Python, NLP, Power BI*

January 2025 - December 2025

- **Led a Deloitte-sponsored MSIS Capstone** to develop a **cloud-based NLP** system analyzing **100K+ Veteran social posts** to identify key themes in mental health, financial well-being, and reintegration.
- **Built** an end-to-end **AWS data pipeline** integrating **S3, Lambda, Glue**, and **OpenSearch** to automate ingestion and classification, enabling **real-time sentiment** tracking across **10+ thematic categories**.
- **Delivered Power BI** dashboards and LLM insights that enhanced Deloitte GPS’s ability to advise Veteran Service Organizations on outreach strategies, improving **interpretability** and **decision accuracy by 25%**.

LAPD Crime Prediction & Analysis – *PySpark, Random Forest, MLlib*

May 2025

- **Built** a scalable PySpark pipeline to analyze 2M+ crime records (2023–2025) for type **classification**, **hotspot detection**, and **spatiotemporal pattern clustering**.
- **Achieved 88.79% top-5 accuracy** using a **Random Forest model** tuned with **CrossValidator** and **grid search**, integrating **StringIndexer**, **OneHotEncoder**, and **VectorAssembler** for preprocessing.

SHYFT Blockchain Business Case – *Solidity, Ethereum, Smart Contracts, Web3*

May 2025

- **Designed** a blockchain-enabled MVP for SHYFT, a decentralized logistics solution leveraging smart contracts for supply chain transparency and tokenized data exchange.
- **Deployed** a working ERC-20 token prototype using **Solidity** and **HTML/CSS front-end integration**, ensuring secure and traceable transactions.
- **Led** strategic planning around token utility, governance, and ecosystem engagement for cross-platform **interoperability** and **trust assurance**.

Spotify Product Personalization & AI Recommendations – *Product Strategy & Data Analytics*

May 2025

- **Conducted product strategy analysis** on Spotify's AI-driven personalization features, identifying key metrics to enhance user retention and content discovery.
- **Proposed** data-driven recommendations to optimize recommendation systems using hybrid collaborative filtering and **user clustering insights**.
- **Designed UX mockups** and **KPI dashboards** demonstrating how AI integration can **improve** engagement across **global markets**.

Capital Area Food Bank AI Assistant – *React.js, Node.js, OpenAI API, OpenCageData API, JavaScript, JSON*

April 2025

- **Led end-to-end development** of a multilingual AI chatbot for food-insecure neighbors in the **DC metro area**, enabling users to locate and filter **500+ food resources** by ZIP code or location, while addressing barriers like confusing maps, language gaps, transportation access, service requirements, and social stigma using **GPT-3.5** and **geospatial intelligence**.
- **Built** a responsive dark-mode front-end with React.js featuring map-based food bank pins and interactive site cards displaying address, open hours, and service information.
- **Developed** backend RESTful APIs with Node.js/Express.js and OpenCageData API, achieving **>90% match accuracy** and **reducing query latency by 40%** by optimizing JSON schema design and geolocation handling.
- **Cleaned and unified 6+ CAFB datasets** using JavaScript to merge appointment requirements, food format, cultural services, and transportation access metadata into a streamlined structure.
- **Enhanced accessibility** with a custom TranslationService supporting **dynamic English-Spanish language switching** and fallback to GPT for non-location-based queries, significantly improving engagement among **Spanish-speaking users**.

Buccal Pulse Oximeter to Overcome Racial Biases – *Python, MATLAB, Arduino*

May 2023

- **Led** a team of five to develop a **buccal pulse oximeter**, reducing **racial biases** in oxygen saturation measurement by **20%** using advanced **sensor technology** and **signal processing**.
- **Developed and optimized** data analysis in **Python and MATLAB**, achieving **95% measurement accuracy** while maintaining **production costs under \$40 per unit**.
- **Demonstrated** the prototype to **20+ clinicians and engineers**, validating its **effectiveness in clinical trials**.

AFFILIATIONS & ADDITIONAL INFORMATION

- **Member** – Black Engineers Society, National Society of Black Engineers (NSBE)
- **Languages** – Fluent in English and Wolof; basic proficiency in French