

Abdoulay Lashley

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EDUCATION

University of Maryland, Robert H. Smith School of Business

Master of Science in Information Systems, GPA: 3.7

College Park, Maryland

August 2024 – December 2025

- **Relevant Coursework:** Data Mining & Predictive Analytics, Designing Generative AI Systems, AI for Business Applications, Data Processing, Analysis & Modeling, Database Management, Data Visualization, Cloud Computing, Project Management, Industry Practicum
- **AWS Academy Graduate** – Cloud Architecting & Machine Learning Foundations (Certificate), 2025
- **Terrapin Scholar** – University of Maryland, 2024–2025 | **Dean's List** – 2020–2021, 2022–2023, 2024–2025

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

Programming & Data Processing:

Python, R, SQL, JavaScript, TypeScript, JSON, Hadoop, Pig, Hive, Spark, MapReduce, PySpark MLlib, Spark Streaming, Node.js, Express.js

Machine Learning & Statistical Analysis:

AI/ML, NLP, LLM, OpenAI API, Amazon SageMaker, AWS Comprehend, Pandas, Seaborn, Scikit-learn, Regression & Classification Techniques, Frequent Pattern Mining, Cluster Analysis, A/B Testing

Business Intelligence & Data Visualization:

Power BI, Tableau, Amazon QuickSight, Google Analytics, React.js, Next.js, Tailwind CSS, Leaflet.js

Databases & Cloud Technologies:

SQL, NoSQL, MySQL, MongoDB, Neo4J, Snowflake, BigQuery, AWS(EC2, S3, RDS, Lambda, VPC, CloudFront, Glue, CloudFormation, IAM), Microsoft Azure, Google Cloud Platform (GCP), Vercel CDN

Project & Product Management:

Agile, SCRUM, Risk Management, QA, Product Management, JIRA, Confluence, Microsoft Project, Figma (UX/UI) Design

Business Strategy & Communication:

Business Strategy, Stakeholder Communication, Cross-functional Collaboration, Prioritization

Software & Tools:

HTML, CSS, XML, GPT-5, Jupyter, VSCode, Git/GitHub, Lighthouse, Chrome DevTools, SAP Products, Microsoft Office, Google Applications, Google Colab, Lucidchart, Apache Hadoop, Apache Spark, Spark GraphFrames, Kafka, Sqoop, OpenCageData API, Geolib, REST APIs

WORK EXPERIENCE

L'Oréal USA

Somerset, New Jersey

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

June 2023 – August 2024

- **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.

PROJECT EXPERIENCE

Veteran Sentiment Analysis Platform – Deloitte GPS | *Python, NLP, FastAPI, LLMs*

January 2025 - December 2025

- **Led a Deloitte-sponsored** MSIS Capstone project as **Project Manager and Business Requirements Lead**, guiding a **5-person** team to analyze **over 1,000** public Reddit posts from U.S. veterans on key issues such as mental health, financial stress, and educational benefits.
- **Designed and implemented** an **end-to-end NLP pipeline** in Python to clean and normalize text, score sentiment using both traditional models and LLM-based methods, extract key phrases, and cluster conversations into themes and inferred veteran personas.
- **Delivered** an **interactive web dashboard and AI Copilot** built with **HTML, CSS, JavaScript, Chart.js, and a FastAPI-based RAG service**, enabling nontechnical stakeholders to explore sentiment trends, drill into supporting posts, and ask context-aware questions grounded in the data.

Full-Stack Product Management Bootcamp (Certificate) – *Product Strategy, User Research*

September 2025 - October 2025

- Earned a **certificate** of completion from **Leland** for a 6-session intensive program on end-to-end product management, completing **10+ applied case studies and product challenges** simulating real-world PM scenarios.
- Applied frameworks for **roadmapping, PRD creation**, and KPI-driven prioritization, improving feature **decision accuracy** and **trade-off clarity**.
- Improved **stakeholder communication** and **presentation** impact through live workshops and peer feedback.

Generative AI Dynamic Travel Itinerary Planner – *Python, OpenAI API, FastAPI, JavaScript*

October 2025

- **Designed and developed** a **Generative AI travel planner** that generated **personalized day-by-day** itineraries using **real-time flight, event, and weather data** combined with user preferences such as budget, interests, and trip length.

- Integrated the **OpenAI API with Python (FastAPI) backend** and an interactive **HTML/CSS/JavaScript frontend**, enabling natural-language trip modifications like “add more food options” or “reduce my budget.”
- Contributed to **LLM prompt design and orchestration**, ensuring contextual accuracy, ethical use, and transparent explanations, demonstrating a **scalable, user-centric AI application** that improved trip personalization efficiency by **~30% in testing**.

NBA Team Performance Evolution – Tableau, Python, nba_api, Data Visualization

October 2025

- Built an interactive **Tableau** story analyzing a decade of NBA team performance (2014–2024) using **data engineered in Python** from the official **NBA Stats API**.
- Developed custom metrics for **Offense Index, Defense Index**, and **Top Teams Metric, ranking 30 franchises** by efficiency balance to **uncover patterns** behind championship success.
- Designed **3 dynamic dashboards** and 1 supplemental analytics page, integrating **calculated fields, LOD expressions**, and **geographic mapping** to visualize the NBA’s transition into the pace-and-space era.

Personal Portfolio v4 – Next.js, React, Tailwind, TypeScript, Vercel

September 2025

- Built a production-grade personal portfolio using Next.js App Router with **10+ reusable components**, dynamic project modals, and a custom asset viewer supporting images and PDFs.
- Optimized frontend performance and quality, achieving **100 Performance, 96 Accessibility, 100 Best Practices**, and **100 SEO** scores on PageSpeed Insights (desktop).
- Delivered fast and stable user experience with **0.2s FCP, 0.4s LCP, 10ms Total Blocking Time, 0 CLS**, and **0.5s Speed Index** on a Vercel-hosted deployment.

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.

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**.

The Weeknd Effect Streaming Analytics – Python, Pandas, Scikit-Learn, SHAP

December 2024

- Engineered multi-platform datasets and analyzed **200+ audio** and **release features** to model drivers of global streaming performance.
- Built regression models achieving an **R² of 0.82** and applied **SHAP interpretability** to surface key contributors to virality and long-tail engagement.
- Created narrative data visuals that clarified **model insights** for non-technical audiences, highlighting patterns such as 3.7B streams for “Blinding Lights.”

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