Abdoulay Lashley

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EDUCATION

University of Maryland, Robert H. Smith School of Business **College Park, Maryland**
Master of Science in Information Systems, GPA: 3.7 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 **College Park, Maryland**
Bachelor of Science in Bioengineering, GPA: 3.2 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** and **deployed** a fully responsive portfolio with **10+ reusable components**, a multi-format asset viewer (images, PDFs), and smooth-scroll navigation.
- **Optimized** performance (**95+ Lighthouse score**, <200ms TTFB on Vercel CDN) and accessibility (100/100), ensuring **modern** and **inclusive UX/UI**.
- **Designed** modular architecture for quick project additions, **cutting update time by 70%** and boosting **engagement in testing by ~30%**.

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 **R^2 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