

Bernard Boateng

Chicago, IL

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WORK EXPERIENCE

Nilotic Hoops AI **May 2025 - Present**
Full-Stack AI Engineer Chicago, IL

- Built AI-powered basketball talent discovery platform using pose estimation and object detection to analyze game footage and generate automated skill assessments for athlete recruitment.
- Developed multi-factor scoring engine ranking athletes on shooting form, athleticism, and game performance with personalized training recommendations.
- Deployed full-stack recruiting platform (React 18, FastAPI, Supabase) with video analysis pipeline, scout discovery dashboard, and role-based authentication at <500ms response times.

Loyola University Chicago **Jan 2025 – Dec 2025**
AI/ML Engineer Chicago, IL

- Built AI-powered malaria prioritization chatbot (ChatMRPT) with multi-model routing, integrating 10+ geospatial analysis tools to process environmental raster data for public health decision-making.
- Developed ensemble ML model combining gradient boosting with spatial clustering to predict disease hotspots, achieving 95% classification accuracy.
- Deployed production system on AWS (EC2, ALB, CloudFront, ElastiCache) with sub-second response times supporting concurrent users.

Loyola University Chicago **May 2024 - Dec 2024**
Data Science Intern Chicago, IL

- Built factorization-based texture segmentation model achieving 80% accuracy for urban settlement classification to support targeted health intervention planning.

TECHNICAL SKILLS

AI & Machine Learning: MoveNet pose estimation, YOLOv8 detection, multi-model LLM routing (GPT-4o, Mistral, Qwen3, Llama), LangGraph, embeddings (Sentence-Transformers), PyTorch, Scikit-learn

Data Science: Pandas, NumPy, DuckDB, Plotly, Matplotlib, GeoPandas, GDAL, Shapely, raster processing, Folium

Full-Stack Engineering: FastAPI, Flask, Pydantic, PostgreSQL/Supabase (RLS + Auth), Redis, Gunicorn, WebSockets, React 18, TypeScript, TanStack Query, shadcn/ui, TailwindCSS

Cloud & DevOps: EC2, Application Load Balancer, CloudFront, ElastiCache Redis, GitHub Actions CI/CD

PROJECTS

Fraud Detection System | [Live Demo](#) | [GitHub](#)

- Built ML-powered fraud detection system using XGBoost achieving 92.2% ROC-AUC with <200ms response time, deployed as full-stack application detecting 73.2% of fraud while maintaining 9.3% false positive rate.

EDUCATION

Loyola University Chicago Chicago, IL
PhD in Computer Science 2026 - Present

Loyola University Chicago Chicago, IL
Master of Science in Data Science December 2024