

Oriel Savir

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EDUCATION

Johns Hopkins University

Baltimore, MD

B.S. Computer Science, B.S. Applied Mathematics & Statistics | **GPA: 3.96 (Dean's List)**

May 2026

- **Relevant Coursework:** Data Structures, Computer Systems, Artificial Intelligence*, Deep Learning*, Computational Genomics*, Cryptology*, Multivariable Calculus, Linear Algebra, Probability & Statistics* [* indicates graduate level]

SKILLS

Programming Languages: Python, C++, TypeScript, JavaScript, C, Java, x86 Assembly, HTML, CSS

Frameworks & Libraries: Node, React, Next.js, Express, PyTorch, NumPy, SciPy, pandas, Polars, PySpark, SQLAlchemy

Tools: Git, Docker, PostgreSQL, MySQL, AWS S3, AWS Lambda, Apache Spark, Apache Arrow, Delta Lake, Snowflake, Databricks, Postman, Jest, Makefile

EXPERIENCE

Capital One

May 2024 – Aug 2024

Software Engineering Intern (ML/Data Infrastructure)

- Built a **Python SDK** exposing a **programmatic API** for feature store microservices, collaborating with cross-functional ML platform and software engineering teams, enabling creation, management, and querying of feature stores at scale
- Led end-to-end development of Capital One's first **feature store** for credit decisioning, integrating **DynamoDB (real-time)** and **in-process SQL (offline)** as a cache layer, accelerating ML training and inference by over 10x
- Engineered modular components for distributed data access and processing using **Apache Spark** and **Polars**, optimizing **Delta Lake** I/O to support sub-2ms feature retrieval in production systems
- Developed a modular API layer for **Snowflake**, abstracting query execution, caching, and database I/O running on **AWS EMR** and **Databricks**, eliminating hundreds of hours of manual migration overhead

Xtractor

Jun 2023 – Dec 2023

Software Engineering Intern

- Led development and deployment of a full-stack web app in **Next.js** (TypeScript) and Python for extracting tables from unstructured documents, collaborating with a team of 6 as lead full-stack engineer
- Built a **RESTful Flask API** with serverless endpoints integrating **AWS Lambda & S3** and a PyTorch model on AWS SageMaker, supporting 1000+ concurrent tasks and reducing inference time by 40%
- Designed 30+ reusable **React** components and built 5 performant front-end pages using ShadCN and Tailwind CSS, leveraging server-side rendering to improve UX as validated through usability testing

JHU Department of Computer Science

Dec 2023 – Present

Machine Learning Researcher

- First-author and lead researcher on a novel CNN architecture, NE-LPNs, improving robustness of deep learning inverse problems, with real-world applications in AI-powered imaging and latent generative systems
- Implement CNNs using **PyTorch**, achieving an over 100% robustness increase of performance on benchmarks

Johns Hopkins University

Jan 2025 – Present

Senior Teaching Assistant, Deep Learning (CS 482/682)

- Support 150+ students in a graduate-level deep learning course covering supervised and unsupervised learning, neural architectures, optimization, and novel deep learning applications

PROJECTS

Medslate | TypeScript, Next.js, MySQL, Prisma, tRPC, AWS S3, AWS Transcribe, OpenAI API

[GitHub](#)

- Developed an AI-powered medical scribing web app utilizing TypeScript with Next.js, AWS Transcribe & OpenAI API to produce no-jargon appointment transcripts and insights
- Integrated a real-time backend (MySQL, Prisma, AWS S3) and deployed using GitHub Actions for CI/CD
- Won the *Bloomberg Most Philanthropic Hack* award at HopHacks MLH hackathon

Stochastic Reaction-Diffusion Simulator | C++, GNU Scientific Library

- Developed a stochastic reaction-diffusion simulator in C++ for researchers at JHU Department of Biophysics, applying differential calculus and geometry to simulate molecular dynamics and produce 3D graphical renders
- Improved simulator performance by 25% through cache-friendly data structures, vectorization, and multithreading