Daniel Coblentz

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EDUCATION

Hood College | Frederick, MD Expected Jun 2026

B.S. in Computer Science, Minor in Mathematics *Cumulative GPA: 3.84*

- **Coursework**: Artificial Intelligence, Data Structures & Algorithms, Databases, Software Engineering, Data Communications.
- **Awards**: Volpe Scholar, Christine P. Tischer Scholar (top 2%), Dean's List (all semesters), CS Honor Society (top 5%).

SKILLS & TECHNICAL TOOLS

Programming Languages: Java, Python, JavaScript, TypeScript, SQL (MySQL, Postgres), C++, Bash, R
Web/Backend: Spring Boot, Node.js, Next.js, React, FastAPI, Flask, REST APIs, MVC, Microservices
ML/Data: PyTorch, TensorFlow, Scikit-learn, HuggingFace, LangChain, Computer Vision, Pandas, NumPy
Cloud/DevOps: AWS (Lambda, S3, DynamoDB), GCP, Docker, Kubernetes, Linux, JUnit, CI/CD Pipelines, Git

PROFESSIONAL EXPERIENCE

Lawrence Berkeley National Laboratory May 2025 — Present

Machine Learning Research Intern

- Designed multimodal ML pipelines using TabNet and ClinicalBERT to classify high-risk medical cohorts with 90% ROC-AUC.
- Architected Python ETL pipelines to transform 80k+ medical records into numerical embeddings for scalable model training.
- Improved Random Forest and Logistic Regression performance via feature engineering, raising accuracy from 80% to 89%.

Celebrations Catering Sept 2024 — May 2025

Software Engineer

- Built a full-stack workflow editor in React and Java for employee management tasks, cutting manager process time by 50%.
- Developed 15+ Spring Boot REST APIs for employee record management with input validation and comprehensive unit tests.
- Automated email notifications with JavaMail and Spring Scheduler, reducing manual communication overhead by 70%.

Hood College Department of Computer Science Sept 2023 — May 2025

Graduate Research Assistant & Undergraduate Teaching Assistant

- Implemented Computer Vision quantization techniques in PyTorch, reducing model size by 20% for edge deployment.
- Calibrated ResNet-50 model on ImageNet, achieving a 19% improvement in Top-5 accuracy over uniform quantization.
- Instructed 60+ students in Data Structures & Algorithms and Python, Java, and JavaScript through lectures and lab sessions.
- Led algorithmic problem-solving sessions, performed regular code reviews, and received consistent 5/5 ratings from students.

PROJECTS

Travel Booking Platform | *Node.js, Next.js, PostgreSQL, Docker, AWS EC2, GitHub Actions*

- Built a full-stack booking app in Next.js and Node.js with role-based access, deployed with Docker on AWS EC2.
- Designed REST APIs and PostgreSQL schema with Prisma ORM, implementing input validation and integration test suites.
- Configured CI/CD pipeline with GitHub Actions for automated testing and deployment, reducing release cycle time by 40%.

Lens - RAG document system | *AWS Lambda, TypeScript, Python, DynamoDB, S3, LangChain*

- Built a serverless AWS Lambda system to extract key terms from legal contracts with 96% clause identification accuracy.
- Implemented recursive chunking and LangChain RAG pipelines with vector embeddings, improving clause extraction by 23%.
- Architected persistent server with Redis caching and S3 storage, cutting latency by 70% on long-running documents.

Credit Risk Dashboard | *Java, Spring Boot, React, PostgreSQL, Chart.js, Docker*

- Built a full-stack credit risk dashboard in Spring Boot and React to calculate borrower risk scores across 10K+ loans.
- Developed REST APIs to compute debt-to-income and loan-to-value ratios, flagging high-risk applicants in under 100ms.
- Designed interactive Chart.js visualizations for default probability distributions and portfolio risk segmentation.

LEADERSHIP & ACTIVITIES

Vice-President (Co-lead), Competitive Programming Team | *C++, Python* Oct 2024 — Present

- Ranked 3rd of 16 teams at CCSC-Eastern Regionals, utilizing advanced data structures and algorithmic optimization.
- Facilitated 15+ practice sessions on graph theory and dynamic programming, improving team problem solving speed by 17%.
- Collaborated on a team repository to build C++ templates for algorithmic patterns, boosting team solving speed by 24%.