Jonathan Godwin

Available From April to August 2026

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Engineering student in Computer Science and Statistics (penultimate year, Engineering School). Passionate about software engineering, algorithms, and data science. Strong experience in full-stack development and applied data projects. Entrepreneurial mindset with a National Student Entrepreneur Status (SNEE).
Available from April to August 2026 for at least 12-week internship

TECHNICAL SKILLS

- **Core Concepts**: Operation Research (Linear Programming, Simplex, Dynamic Programming, Constraint Modeling), Advanced Algorithms (Scheduling, Topological Sort, Graph Theory), Object-Oriented Programming (OOP), Data Pipelines, PCA.
- **Programming Languages**: Java, C, Python, JavaScript, PHP, SQL.
- **Tools:** Git (Github, Gitlab), Docker.

EDUCATION

Polytech Lille (Lille, France) | 2024 – 2027
M.Eng. (Diplôme d'Ingénieur) in Computer Science & Statistics (Penultimate Year)

University of Caen Normandie (Caen, France) | 2022 – 2024 B.S. in Computer Science (Years 1 & 2)

French Baccalaureate (Scientific) | 2022
Graduated with Highest Honors (Mention Très Bien)

LANGUAGES & INTERESTS

- **Languages:** French (Native), English (Proficient - B2), Spanish (Intermediate - B1) .
- **Interests**: Running (5km in 21 mins; demonstrates discipline and goal-oriented mindset), Music (Piano & Guitar), Poetry

ACADEMIC & PERSONAL PROJECTS

Scheduling & Constraints Engine (Java, OOP)
- Designed and implemented a task scheduling engine in Java.
- Modeled and managed complex constraints (Precedence, Disjunction, temporal constraints).
- Implemented a Topological Sort algorithm to determine an optimal task execution order.
- Applied advanced OOP principles for a modular and generic architecture (e.g., BinaryConstraint, TopologicalSorter).

Hybrid Recognition Engine (Java, Machine Learning)
- Designed an OOP decision engine merging business rules (Gower Metric) and semantic analysis (Cosine Similarity via Hugging Face API).
- Managed embedding integration and vector normalization for efficient, large-scale similarity searches.
- Developed Data Access Object (DAO) classes for reliable data persistence and retrieval (PostgreSQL).
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Foundational Data Science (Python, NumPy, Pandas)
- Implemented Principal Component Analysis (PCA) from scratch, including manual data scaling (scale_matrix), covariance matrix computation (correlation_matrix), and eigenvector extraction (np.linalg.eig).
- Analyzed component inertia (variance) to determine optimal dimensionality reduction, successfully identifying the first two components as explaining >90% of the total variance.
- Demonstrated deep understanding of the underlying linear algebra and statistical methods for data analysis and model preparation.

Graph Algorithms & Networks (C, Combinatorics)
- Designed and implemented high-performance data structures in C to model complex networks.
- Applied Dinic's algorithm to efficiently compute maximum flow in a network.
- Strengthened knowledge of algorithmic complexity and optimization.

PROFESSIONAL EXPERIENCE

Crew Member - Quick Service Restaurants (Popeyes & McDonald's, Part-time 18h/week)
Caen & Lille, France - June 2023 to Present
- Balanced demanding shifts with full-time engineering studies, demonstrating discipline and resilience.
- Developed strong teamwork and communication skills in high-pressure, fast-paced environments.
- Strengthened time management and ability to adapt quickly to operational challenges.
- Gained experience in customer service and maintaining performance under stress.