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## EDUCATION

**Williams College**, Williamstown, MA | GPA: 3.95 (Major) / 3.89 (All), Bachelor of Arts in Computer Science, June 2025

**Selected Coursework:** Operating Systems, Distributed Systems, Deep Learning, Natural Language Processing, Machine Learning, Causal Inference, Probability, Linear Algebra, Algorithms & Analysis, Data Structures.

**Honors:** CRA Undergraduate Researcher Award: Honorable Mention, Williams College x Mysten Labs Hackathon: 1st Place, Class of 1960 Scholar of Computer Science, Ward Prize Nomination, Dean's List

## TECHNICAL SKILLS

**Programming Languages:** Python, C/C++, Go, JavaScript / TypeScript (Proficient) | R, Java, Shell, Move, SQL, F# (working knowledge)

**Tools:** React, AWS S3 / & R53, Node, Git, Ab Initio, CSS (Development) | Snowflake, Postgres (Database) | Torch, Tensorflow (Keras), Scikit-learn, OpenCV, Hydra (AI/ML) | OpenGL, GLSL, x86, LaTeX, .NET (Other)

## PUBLICATIONS

**SPIDER: Improved Succinct Rank and Select Performance**

M. D. Laws, J. Bliven, K. Conklin, E. Laalai, S. McCauley, and Z. S. Sturdevant Symposium on Experimental Algorithms (SEA), 2024. [[arXiv](#)] [[LIPIcs](#)]

## SELECTED PROJECTS

**Peer-to-Peer Federated Learning:** Developed a system using Go and Python for a P2P federated learning system. Clients join the network and receive a model to train on and periodically they send an aggregation request to a random subset of nodes. We also developed support for managing multiple models at a time.

**ASL Interpreter:** Developed a computer vision model that identifies ASL letters. Attained 97% accuracy for letters and 95% accuracy for words. Ships with a live video recognition feature for real time translation.

**Bookstore:** Developed a test scale Bookstore application in Go using XML-RPC to communicate with clients. Additionally connected the store to an SQL database to store inventory.

**Thread Library, Disk Scheduler, & Memory Manager:** Using C, implemented a thread library with synchronization primitives and a process level disk scheduler. Additionally, implemented a memory pager with multi-process scaling.

**Snar Delivery:** Developed a web3 food delivery service like DoorDash on Sui Move. Hosted @ [snar-delivery.vercel.app](#).

## SOFTWARE EXPERIENCE

**Sanofi**, Cambridge, MA, *Data Scientist Intern* May 2024 - August 2024 • Worked in the ML / AI team as a Data Scientist to leverage computer vision techniques in the clinical setting • Summarized findings in a paper currently under company review.

**Williams College**, Williamstown, MA, *Computer Science Research Fellowship* June 2023 - May 2024 • Worked with Professor Sam McCauley to develop a faster Succinct Rank and Select Data Structure • Developed theoretical algorithms, implemented, and optimized them in C • Presented my research in a talk at the Symposium on Experimental Algorithms 2024.

**Integral Ad Sciences**, New York, NY, *Data Engineering Intern* June 2022 - August 2022 • Worked in a team of 4 using the Agile methodology to develop a regression testing software IAS's twitter brand safety pipeline.

**Williams College**, Williamstown, MA, *Teaching Assistant* Sept 2022 - Present • Host 3 TA sessions a week to help students with lab assignments • Current Deep Learning TA and have TAed Computer Organization and Data Structures in the past.

**Williams Students Online (WSO)**, Williamstown, MA, *President / Lead Developer* June 2024 - Present • Maintain full stack (React + Go) codebase for student website and mobile app used by 2000+ students and faculty.

## LEADERSHIP EXPERIENCE

**Williams College Rugby Football Club (WRFC):** *Captain* May 2024 - Present

**Williams Record**, *Website Editor* Jan 2024 - Present

**Williams College Junior Advisor Program:** *Junior Advisor* May 2023 - May 2024