Beckett Dunlavy

(505)-738-9180 | beckett.dunlavy@gmail.com | GitHub | LinkedIn

Objective

To obtain a Summer 2026 internship in advanced computing (Machine Learning or HPC systems engineering) to leverage my experience and interests in MPI-based parallelism, hybrid CPU–GPU optimization, and agentic-assisted software development.

Education

University of New Mexico — Albuquerque, NM
Major: Computer Science (Engineering) | Minor: German Language, GPA: 4.14/4.0 — *Aug. 2022 – Present*

- Awards: Dean's List (5 semesters); Woodward Scholarship (4 years)
- Relevant Courses: High Performance Computing | Parallel Processing | Numerical Computing | Linear Algebra | Algorithms 1 | Design of Large Programs | Computer Logic and Design | Mathematical Statistics | Calculus I/II
- Spring 2026 Courses: Computer Architecture and Design | Algorithms 2 | Software Engineering | Machine Learning

Freie University — Berlin, Germany
European Studies Program, Intensive German Language Program (B2/C1) — *Aug. 2024 – Dec. 2024*

Google Cybersecurity Professional Certificate — Coursera Online
8-course cybersecurity certification program — *June 2024*

Experience

Research Assistant — May 2025 – Present
UNM Department of Computer Science, Advisor: Dr. Amanda Bienz — *Albuquerque, NM*

- Benchmarked the Hypre algebraic multigrid (AMG) linear solver on the DeltaAI HPC cluster at UIUC
- Extended existing C++ software to optimally leverage CPU and NVIDIA GH200 GPUs in AMG linear solvers

Faculty Assistant / Tutor — May 2024 – May 2025
UNM Department of Computer Science — *Albuquerque, NM*

- Created a curriculum to teach Git/GitLab to incoming and enrolled CS students
- Produced educational YouTube videos teaching the curriculum
- Tutored undergraduate computer science students in a variety of classes

Teaching Assistant — Jan. 2024 – May 2024
UNM Department of Computer Science — *Albuquerque, NM*

- Assisted in teaching duties for Intermediate Programming (CS 251) section with 18 students
- Led weekly lab sessions, helped students with content understanding, graded homework
- Hosted weekly office hours, helping students 1-on-1 with homework and programming assignments

Projects and Activities

Student Cluster Competition | *HPC, Linux, C++* — Jul. 2025 – Nov. 2025

- Collaborated with teammates to optimize applications on VMs ran on the Jetstream2 cloud system
- Built and ran climate applications across multiple nodes using slurm

UNM App Contest | *Full stack development* — Aug. 2025 – Oct. 2025

- Create an app to help voters understand their local elections and candidates

HPBench | *Python, HPL* — Oct. 2025 – Present

- Local web application to run parameters sweeps for the HPL (High Performance Linpack) benchmark
- Displays results for the tested HPL configurations using matplotlib
- Currently adding other benchmarks for HPC (STREAM, HPCG, ...)

GitHub: Scrabble | Word Search Solver | LCG cipher

Technical Skills

Development: Java | C/C++ | Python | Jupyter Notebooks | MATLAB | Bash | Claude Code | Codex | Github Copilot

HPC: *Benchmarks* – HPL, STREAM | *Systems* – JetStream2, CARC, DeltaAI | *Tools* – MPI, slurm, spack

Tools: Git/GitHub | LaTeX/Overleaf | Linux | MacOS | Windows | Microsoft Office Suite | Google Workspace