Manjot Sandhu

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LinkedIn | GitHub | Portfolio

Education

Georgia Institute of Technology (Online) *Starting Jan 2027*
M.S. Computer Science, Machine Learning Specialization

University of Nevada, Las Vegas | *Dean's Honors List (24-26)* *Aug 2023 - Dec 2026*
Bachelor of Science in Computer Science *GPA: 3.92/4.0*

Technical Skills

PROGRAMMING LANGUAGES: Python, C++, C, C#, TypeScript/JavaScript, Java, SQL
FRAMEWORKS/LIBRARIES: PyTorch, NumPy, Pandas, Matplotlib, Scikit-learn, FastAPI, Selenium
TOOLS/PLATFORMS: Git, AWS, CI/CD, pytest, Protobuf, Docker, PostgreSQL, Redis, Ubuntu

Technical Projects

FOMO - Event Discovery App | 1st Place, UNLV CS Senior Design | Python, TypeScript | GitHub

- Shipped to the App Store with 100+ installs as sole designer of the retrieval and recommendation system on an 11-person team, building the three-slice user weight vector, two-tower retrieval model, weight decay, re-ranker, and authenticated HTTP query layer
- Replaced full recomputation of every user's weight vector with incremental deltas applied only to users whose interactions changed, tracking previous interaction state so status toggles stay correct
- Proved the incremental path equivalent to full recomputation after finding that the non-linear activation made stored weights non-additive, then moved that activation from write time to recommendation time
- Covered interaction-toggle edge cases and batched-query assertions with pytest so correctness regressions fail in CI instead of shipping silently

Meridiem - AI Lead Follow-Up Platform | Python, FastAPI, PostgreSQL, Twilio | GitHub | Visit Site

- Served multiple businesses from one FastAPI backend that validates Twilio webhook signatures, routes each inbound text to the company that owns the number, and drops duplicate provider events on carrier retries
- Constrained the LLM to a typed decision validated by Pydantic and left every send to deterministic code, so malformed output or an API failure escalates the lead to a human instead of sending anything
- Matched STOP and emergency keywords in code ahead of the model, then rechecked consent at send time
- Scoped staff access with owner, admin, and staff roles, invite-based signup, mandatory 2FA, and live conversation streaming over authenticated WebSockets

Minecraft AI Agent | Python, Java, Protobuf | GitHub

- Bridged a Java game client and a Python learner for reinforcement learning, streaming entity, inventory, and block state through a custom Fabric mixin mod over Protobuf sockets
- Wrote the PPO actor-critic trainer in PyTorch from scratch against a shared Protobuf schema that moved state and actions between the two processes fast enough to step the environment in real time

Work Experience

Operating Systems Teaching Assistant | UNLV *Aug 2025 - May 2026*

- TA for 100+ students across two semesters as the section grew from 30-40 to 60-70, grading xv6 kernel projects and debugging student implementations of MLFQ scheduling and shared-memory syscalls
- Reverse-engineered xv6's undocumented memory allocator and wrote line-level source annotations that became the class reference for a segmented paging assignment the full cohort was stuck on

IT Technician | Top Notch Computer Solutions *May 2025 - Aug 2026*

- Diagnosed and resolved hardware, software, and network failures on-site for 50+ Las Vegas businesses, working under live client conditions with no escalation path
- Provisioned Active Directory accounts and deployed printers, PoE phones, and camera systems across client sites

Involvement

ACM Training Officer & ICPC Competitor | ACM UNLV *June 2024 - August 2026*

- Placed 1st in UNLV Codeathon and competed in the Southern California ICPC Regional 2024; delivered technical presentations on algorithms and problem-solving to 50+ members

Additional

LANGUAGES: English - Fluent, Punjabi - Fluent