

SEAN HAU GOH

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EDUCATION

Texas A&M University

May 2028 | GPA: 3.93/4.00

Bachelor of Science in Computer Engineering, Minors in Engineering Entrepreneurship & Math

- Engineering Honors, Halliburton Engineering Global Programs Grant, Dean's Honor Roll
- Relevant Coursework: Data Structures & Algorithms, Computer Systems, Computer Architecture, Software Engineering

EXPERIENCE

Software Engineering Intern – AI/Perception & Systems | PostgreSQL, Python, OpenCV, Open3D **May 2026 – Aug 2026**
OpenHub – UCLouvain Louvain-la-Neuve, Belgium

- Diagnosed unindexed reverse joins causing linear degradation across **million-row PostgreSQL tables**; added targeted indexes to cut average node-hop latency from **446 ms to 2.7 ms (165×)**
- Curated and labeled synchronized data for BEV radar-camera fusion with PhD researchers, using **LiDAR as privileged training-time supervision** and human-in-the-loop temporal review to resolve occlusions and ambiguous labels
- Developed multi-sensor tooling with Unix Epoch camera-radar sync, **sub-microsecond gPTP LiDAR-camera alignment**, and Open3D visualization, integrating CA-CFAR/DBSCAN radar detection and tracking with an international team

Full-Stack Software Engineer – Systems & Automation | AWS, Playwright, Python, Node.js, Docker **Nov 2025 – Present**
Meloy Program at Texas A&M University College Station, TX

- Own reliability-critical AWS systems and operational tooling supporting **\$1M+** in funded programs and global events spanning **1,500+ participants across 32 universities**, communicating technical tradeoffs and risks to faculty and executive stakeholders
- Developed Playwright-based event check-in automation with pre-release **E2E/regression testing** on synthetic events, reducing production risk for time-critical live events
- Automated a deduplicated GPU media pipeline from Google Drive ingestion through scheduled YouTube review uploads **weeks ahead**, cutting processing time **538s → 71s (7.6×)**

PROJECTS

Turbo Wikipedia Search & Indexer | C++, Windows API, Multithreading, Rabin-Karp **May 2026**

- Built a high-performance search engine and indexer for Wikipedia using raw system calls, achieving **300–400MB/s+** throughput on **30GB** in **≈87s** via multithreaded Rabin-Karp and a custom hash table with memory growth and 64-bit hashing

Aria - American Airlines 2nd + Vultr Winner @ TAMUHack26 | FastAPI, LangGraph, MongoDB, ElevenLabs **Jan 2026**

- Orchestrated a persistent RAG-backed airport agent with fault-tolerant tools for flight search, weather, mapping, and rebooking
- Engineered real-time voice streaming with synchronized audio, character-level TTS alignment, and UI events over WebSockets
- Optimized an audio-reactive Three.js interface to render **20K+ particles at 60 FPS** using FFT and delta-time animation

Kaizen - Toyota 1st @ TAMUHack25 | Arize Phoenix, LangChain, PostgreSQL, Selenium, Beautiful Soup **Jan 2025**

- Built vehicle decision engine using weighted specs + LLM reviews; won Toyota 1st of **200+ projects / 600+ competitors**
- Implemented Arize Phoenix tracing, custom evaluations, and guardrails to improve recommendation reliability

AggieSeek | Python, Firebase **Aug 2024**

- Refactored a Firebase schema for **2,000+ production users** and scripted a Python migration with validation checks, eliminating hours of manual conversion while preserving data integrity

LEADERSHIP & RESEARCH

NVIDIA Deep Learning Institute – Teaching Assistant | LLMs, NeMo, RAG, SFT, LoRA, CUDA **May 2026**

- Supported **~100 participants as 1 of 3 TAs** for “Adding Knowledge to LLMs,” debugging Jupyter/Minikube GPU labs and explaining tradeoffs across RAG, continued pretraining, SFT/LoRA, evaluation, and CUDA-accelerated training and inference

Aggie Events – Product Manager | Next.js, PostgreSQL, Node.js, Express.js **Aug 2024 – Apr 2025**

- Directed a **27-person cross-functional team** with a **5-person core development group**, defining product roadmap and coordinating design and engineering for a campus events platform

Yucatan Initiative – Student Researcher | AI Product Research, Data Synthesis **May 2025 – Aug 2025**

- Secured a **\$2.3K grant** and presented an AI infrastructure dashboard concept to **100+ participants across 4 universities**

SELECTED AWARDS & HONORS

Meloy Fellow (\$10K) | Eagle Scout | 3rd + Best Presentation, Sandia National Labs Aggies Invent (\$1.5K) – LockOut
high-security access system | **5th/75+, Problems Worth Solving (\$500)** – post-quantum cryptography / IBM ML-KEM

TECHNICAL SKILLS

Languages: Python, C, C++, Java, JavaScript/TypeScript, SQL, PHP, HTML/CSS, Go (Golang), Verilog

Frameworks: React.js, Next.js, Node.js, Express.js, Flask, FastAPI, LangChain, LangGraph, Playwright

Data/ML: PostgreSQL, MySQL, Firebase, MongoDB, NumPy, pandas, scikit-learn, PyTorch, OpenCV, Open3D, TensorFlow

Cloud/Tools: AWS (S3, Bedrock), GCP, Git/Github, Docker, Apache, FFmpeg, WebSockets, REST, Bash, Jira, Linux, Windows API