

Tedd Jung

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EDUCATION

Carnegie Mellon University

Master of Science in Electrical & Computer Engineering, Concentration in AI/ML Systems
Bachelor of Science in Electrical & Computer Engineering

Pittsburgh, PA
Dec. 2026
Dec. 2025

WORK EXPERIENCE

Research Assistant

CMU Robotics Institute – Human Sensing Lab

Pittsburgh, PA
Aug. 2026 – Present

- Researching evaluation metrics to quantify appearance and behavioral similarity between virtual avatars, aiming to establish a new benchmark for avatar fidelity, utilizing deep learning techniques like NeRFs and differentiable rendering.

Software Engineer Intern

SpaceX – Starlink Direct-to-Cell

Redmond, WA
May 2026 – Aug. 2026

- Deployed a new beam planning algorithm delivering persistent, multi-day satellite coverage to low-infrastructure areas, supporting use cases from disaster response to large-scale temporary events like concerts and festivals, driving a 25% increase in text service and 120% increase in beam duration at these specific targets.
- Designed algorithms to optimize satellite beam shape and coverage area, improving signal targeting across Starlink's Direct-to-Cell satellite network.

Research Assistant

CMU Athletech Research Lab

Pittsburgh, PA
Aug. 2025 – May 2026

- Engineered a real-time football tackle detection pipeline in PyTorch using YOLO and RTMO for multi-person pose estimation, achieving a 20% improvement in impact detection accuracy over baseline.
- Optimized spatiotemporal feature extraction via convolutional neural networks on live video streams, enabling sub-second inference latency suitable for sideline deployment without specialized hardware.

Software Engineer Intern

Abridge AI Inc.

San Francisco, CA
June 2025 – Aug. 2025

- Built a clinician provider search feature in Next.js using Elasticsearch with full-text, wildcard, and partial matching, eliminating the need for exact queries and boosting search efficiency, significantly reducing the time searching for providers.
- Designed a full-stack architecture with Firestore integration and automated reindexing through a Google Cloud Function running on a Cloud Scheduler, leveraging TypeScript, NestJS (APIs), and Terraform to ensure reliability and scalability.
- Designed a User Roles page in the Admin Dashboard enabling granular clinician permissions, reducing user support requests by eliminating manual admin intervention.

Teaching Assistant: Web Application Development (17-437/637)

Carnegie Mellon School of Computer Science

Pittsburgh, PA
Aug. 2024 – Aug. 2025

- Mentored 100+ students across weekly office hours and sprint reviews for a full-stack web course; guided 20+ teams to ship production-grade React/Django apps evaluated as final deliverables.
- Graded quizzes/assignments, and led lectures, recitations, and office hours on MVC architecture, AJAX, jQuery, JavaScript, React, Django, REST APIs, software development life cycle (SDLC), and best practices in software engineering/development.

PROJECTS

Scientific Text-To-Speech | Python

- Investigated domain adaptation techniques for scientific text-to-speech, benchmarking multiple transformer-based TTS models and improving out-of-domain pronunciation via G2P integration and targeted fine-tuning.
- GitHub:** <https://github.com/tedd1218/Scientific-TTS.git>

Elo-Conditioned Chess Move Prediction | PyTorch, Python, FiLM Conditioning, Stockfish, Flask

- Built and trained a transformer to predict human chess moves conditioned on player skill across 5.4M real-game positions, replacing separate rating-specific models with a single model spanning all skill levels.
- Shipped an interactive demo with a skill slider that reproduces recognizable beginner-to-expert progressions.
- GitHub:** <https://github.com/tedd1218/chess.git>

Multiplayer Texas Hold'em Poker Game | HTML/CSS/JS, Python, Django, Redis, AJAX, AWS EC2

- Created a real-time multiplayer poker game, allowing up to 256 concurrent connections at once, by using websockets and deploying it on AWS EC2 with Nginx web server.
- GitHub:** <https://github.com/tedd1218/chipcity.git>

ADDITIONAL

Languages: Java, Python, C/C++, JavaScript/TypeScript, SystemVerilog/Verilog, MATLAB, SQL/NoSQL, PostgreSQL, R, Swift

Software: VSCode, STM32Cube, AWS, MongoDB, Firestore, Altium, Linux, Elasticsearch

Tools: Git, GitHub, Jira, Confluence, Epsilon3, Linear, LaunchDarkly, Notion, Slack, Docker, Kubernetes, Agile, Codecov

Libraries/Frameworks: React, Next.js, Node.js, Django, Tailwind, TensorFlow, Pandas, scikit-learn, PyTorch, jQuery, RESTful