MIKE TEREKHOV

ACTIVE SECRET SECURITY CLEARANCE

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EDUCATION

University of Southern California | Sept 2023 – May 2025
M.S. Computer Science | GPA: 3.488
Coursework: NLP, Machine Learning, Operating Systems, Data Structures & Algorithms

Boston University | Sept 2019 – May 2023
B.S. Mechanical Engineering, Concentration in Machine Learning | GPA: 3.55

EXPERIENCE

Systems Software Engineer II | Raytheon | Dec 2025 – Present
- Coordinated across software, hardware, and systems engineering teams to drive alignment on defense programs.
- Analyzed complex C++ codebases across multiple systems to resolve issues and lead integration efforts.
- Presented technical findings and C++ code analyses to clients, highlighting system safety and integration strategy.

Artificial Intelligence Engineer | Neuromuscular Dynamics | Mar 2025 – Present
- Built end-to-end ML pipelines with MLPs, LSTMs, and RNNs to extract features from biomechanical sensor data.
- Trained and validated classifiers for ACL injury prediction to inform target rehabilitation protocols.

Quality Engineering Intern | General Electric Aviation | May 2022 – Aug 2022
- Developed a Python heat map tool to visualize entered defect data and precise spatial locations.
- Partnered with engineering teams to conduct part inspections and verify contract compliance.

Autonomous Goose Chasing Drone | BU Capstone Project | Sept 2022 – May 2023
- Applied YOLOv5 object detection across 800+ pretrained classes for real-time target recognition.
- Labeled a custom dataset of 200+ images to train a YOLOv5 model for reliable goose detection.

ACADEMIC PROJECTS

AI Regimen | USC | Dec 2024 – Present
- Developing a RAG-powered decision tool to optimize ART recommendations for 39.9M HIV patients.
- Built a multi-agent AI framework evaluated by an LLM-as-a-judge to reduce model hallucinations.

LLM Text-to-SQL Model | USC | Jan 2025 – May 2025
- Fine-tuned DeepSeek-Coder 1.3B using LoRA on 1,000+ NL/SQL query pairs for an NBA database.
- Implemented RAG to optimize prompts, improving SQL validity by 22% and accuracy by 23%.

Weenix Operating System | USC | Jan 2024 – July 2024
- Built threads, processes, and synchronization primitives for a non-preemptive 32-bit kernel.
- Configured a virtual memory management system (4 GB address space) supporting fork, brk, and mmap.

Stock Trader | USC | April 2024 – May 2024
- Built a full-stack trading application using Node.js, Angular, and Finnhub/Polygon APIs on Google App Engine.
- Developed a Swift iOS companion app using MongoDB to manage data for 10,000+ users.

Reinforcement Learning Cart Simulator | BU | Nov 2022 – May 2023
- Employed Q-Learning with state-action reward training in a controller to improve stability.
- Implemented Double Q-Learning with dual agents to reduce overestimation bias.

SKILLS & INTERESTS

Skills: C/C++, Python, Java, Swift, Rust, JavaScript, SQL, TensorFlow, Flask, Git, Docker, Kubernetes, REST, Bilingual Russian

Interests: 2:28 Marathoner, Club Ice Hockey BU, Sports Coaching, Psychology, Neuroscience, Placebo Effect