

TAHA SHAKEEL

Legal Permanent Resident (U.S. Citizen)

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EDUCATION

Carnegie Mellon University

Bachelor of Science in Statistics and Machine Learning, minor in Financial Management

Pittsburgh, PA

Expected May 2028

- **Cumulative GPA:** 3.94/4.0; Dean's List
- **Relevant Coursework:** Machine Learning, Linear Algebra, Probability, Computer Science, Economics, Financial Modeling
- **Clubs:** RoboSub (Autonomous Underwater Vehicle Team), Sports Analytics, Finance Group, Pickleball, Taekwondo

WORK EXPERIENCE

Machine Learning Engineering Intern

Jun 2026 – Aug 2026

Morningstar

Chicago, IL

- Implemented a PPO reinforcement learning (RL) agent for lifecycle consumption and equity-allocation optimization under CRRA preferences, reducing training time by **54%**, capturing **96%** of optimal expected lifetime utility
- Extended a regression model for retirement portfolio construction, adjusting for private markets pricing and illiquidity
- Operationalized lifecycle income-process research into a Monte Carlo forecasting engine modeling AR(1) dynamics, transitory shocks, and equity-market effects to generate salary paths for Morningstar's Model of US Retirement Outcomes

Software Engineering Intern

May 2025 – Jan 2026

Stereotaxis

St. Louis, MO

- Saved accounting team **5+** hours/week by building an automated invoice-remittance notification system (**SQL**, Messaging API), eliminating manual email tracking for **300+** invoices/month
- Built interactive dashboards with Power BI and Excel to provide financial insights, enabling recovery of **\$2M+ in receivables**
- Developed automated invoice approval workflows with Power Automate, reducing average processing time by **87%** and improving scalability across finance operations

Head Teaching Assistant

Jan 2025 – Present

Carnegie Mellon University, School of Computer Science

Pittsburgh, PA

- Create course assignments and lecture content for a coding with AI course, regularly embracing new AI capabilities
- Lecture **150+** students to build RAG agent on a 300-page document, covering retrieval architecture and prompt engineering
- Coordinate a team of **40 TAs**, streamlining instruction and grading workflows to enhance course efficiency

PROJECTS

Spotify Hit Analysis | R, RStudio

- Analyzed 4,600+ songs from Spotify to identify drivers of streaming success using statistical analysis and feature engineering
- Reduced a high-dimensional music engagement dataset using PCA and hierarchical clustering, identifying latent factors and statistically significant patterns associated with top-performing songs

2-D Shellshock | Python, Git

- Built a physics-accurate 2D artillery engine in Python (vector-based projectile motion, wind resistance, terrain collision) from scratch, 8+ simultaneous physics bodies — no game engine used
- Implemented a modular AI opponent with adaptive difficulty and dynamic movement behavior to enhance gameplay

TECHNICAL SKILLS

Languages: Python, R, C/C++, Java, SQL, MATLAB, HTML/CSS

Tools: Git, Linux, AWS, VS Code, DataBricks, Excel, Claude Code, RStudio, Power BI, Microsoft Office Suite

Frameworks: Pytorch, TensorFlow, OpenCV, Rest API, Numpy, Pandas, MediaPipe, Tidyverse

HOBBIES

Financial Markets, Taekwondo (3rd Degree Black Belt), Eagle Scout, Golf, Pickleball