

# Arman Aydin

 (650)-666-5485  [aaydin06@stanford.edu](mailto:aaydin06@stanford.edu)  [LinkedIn](#)  [Github](#)  [Website](#)

## Education

<b>Stanford University</b> <i>Master of Science in Computer Science (GPA: 3.71 / 4.00)</i>	Expected Jun 2025 Stanford, CA
<b>Stanford University</b> <i>Bachelor of Science in Computer Science (GPA: 3.87 / 4.00)</i>	Sep 2020 - Jun 2024 Stanford, CA
<ul style="list-style-type: none"><li>• <b>Relevant Coursework:</b> Machine Learning, Reinforcement Learning, Computer Vision, Natural Language Processing, Machine Learning with Graphs, Statistical Inference, Systems for Machine Learning, Data Structures and Algorithms, Parallel Computing, Operating Systems, Computer Networking, Compilers, Database Systems, Embedded Systems, Compiler Optimizations, Cryptography</li></ul>	

## Experience

<b>Stanford Vision and Learning Lab (SVL)</b> <i>Python, PyTorch, 3ds Max, JavaScript, Julia, Git</i>	Jan 2024 – Sep 2024 Software Engineer
<ul style="list-style-type: none"><li>• Contributed on the convex mesh data pipeline for <a href="#">BEHAVIOR-1K</a>, a benchmark for evaluating Embodied AI solutions through interactive household activities with physics simulations supervised by Dr. Fei-Fei Li.</li><li>• Developed teleoperation features for <a href="#">OmniGibson</a>, Stanford-developed robot/environment simulation platform built on top of NVIDIA's IsaacSim, including operating the robot simulation with Nintendo Joy-Cons and an Adafruit Gamepad with VR headset.</li><li>• Closed support tickets for bugs reported in demos and extended support for slicing and dicing features.</li><li>• Scripting in Autodesk 3ds Max, integrating CoACD performance metrics, where achieved up to 39% speed-up in internal sanity check scripts for integrity checks of physics simulations.</li></ul>	
<b>Teaching Assistant for CS 107: Computer Organization &amp; Systems</b> <i>C, x86 Assembly, GNU Debugger (GDB), Valgrind, GNU Compiler Collection (GCC)</i>	Sep 2023 – Present Paid Teaching Role
<ul style="list-style-type: none"><li>• Taught a 1.5 hour hands-on section to 25 students and held 6 hours of Office Hours per week. Proofread and exams, answering questions on Ed Discussion daily. Approximately 250 student enrollment per quarter.</li><li>• Topics include: the C programming language, data representation, machine-level code, computer arithmetic, elements of code compilation, memory organization and management, and performance evaluation and optimization.</li></ul>	
<b>BAYKAR Technologies</b> <i>C++, JavaScript, Node.js, React, Pandas, SQL, PostgreSQL, Go</i>	Jun 2023 – Sep 2023 Systems Engineer Intern
<ul style="list-style-type: none"><li>• Contributed to internal features for data aggregation/parsing and SQL Query optimization. Spearheaded an application for optimizing distribution chains through generating and solving real-life shortest-path problems through Dijkstra's, Floyd-Warshall, Johnson's and A* Search Algorithms, achieving an overall %7 speed-up in August.</li></ul>	
<b>Stanford NLP Group</b> <i>PyTorch, TensorFlow, Numpy, SQL, Bash Script, JavaScript, Pytest</i>	Jun 2022 – Sep 2022 NLP Research Assistant
<ul style="list-style-type: none"><li>• Implemented Named Entity Recognition (NER) language models for low-resource languages Kazakh (95% F1-score) and Uyghur (77% F1-score) utilizing syntactic similarities across high-resource languages like Turkish through transfer learning (supervised by Dr. John Bauer and Dr. Chris Manning).</li><li>• Enhanced the Stanford-developed <a href="#">Stanza</a> natural language analysis package, with an 11% increase in parsing speed for nested NER tags, and added generalized transliteration across scripts and word span correction features.</li></ul>	
<b>Infina Software Inc.</b> <i>Node.js, Express, TypeScript, Docker, AWS, MongoDB, Flask</i>	Jun 2021 – Aug 2021 Software Engineer Intern
<ul style="list-style-type: none"><li>• Automated and cleaned fund analysis data pipelines to achieve a 28% increase in processing speed. Implemented microservices for technical analysis indicators like the <i>Relative Strength Index (RSI)</i> and <i>Moving Average Convergence Divergence (MACD)</i>.</li></ul>	

## Publications & Projects

<b>Publications</b>
<ul style="list-style-type: none"><li>• BEHAVIOR Vision Suite: Customizable Dataset Generation via Simulation (Presented in CVPR 2024)</li><li>• BEHAVIOR-1K: A Benchmark for Embodied AI with 1,000 Everyday Activities and Realistic Simulation (Presented in CoRL 2022)</li></ul>
<b>Personal Projects</b>
<ul style="list-style-type: none"><li>• <b>Tip of Your Tongue: A Scalable Reverse Dictionary Model</b>   <i>seq2seq Transformer, HuggingFace, BART, Fine-tuning</i></li><li>• <b>Estimation of Warfarin Dosage using Linear Bandit Algorithms</b>   <i>Multi-armed Bandits, Regression, <math>\epsilon</math>-Greedy</i></li><li>• <b>CitYGuessr: Identify Cities through Images</b>   <i>Computer Vision, ResNET, Inception, CNN, Image Segmentation</i></li><li>• <b>Pintos Operating System</b>   <i>C, Thread Scheduling, User Program Execution, System Calls, Virtual Memory (Paging), Filesystems</i></li></ul>

## Technical Skills

**Languages:** Python (PyTorch, Numpy, Pandas, Matplotlib, TensorFlow), C, C++, JavaScript, Java, TypeScript, SQL, Julia, Go  
**Frameworks:** HTML/CSS, React, Flask, Node.js, Express, Bootstrap, Tailwind CSS, Docker, Unix, Git, Scikit-learn, MongoDB, AWS, Pytest, PostgreSQL