Kirill Polovtsev

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Passionate web developer interested in building systems that streamline difficult tasks and empower users to accomplish more. Fast learner with a world class education in Computer Science. Dedicated to continually discovering more about well-architected and scalable software systems. Focused on shaping the next generation of AI-driven integration.

Technical Skills

JavaScript, C++, C, Java, Python, Verilog, Technical Debugging, Computer Architecture, Bash, Linux, Git, Typescript, SQL, Agile, Supervised/unsupervised Reinforcement Learning , Data Labeling , HTML, Angular, Regex, PHP

EDUCATION

University of Texas at Dallas Dallas, TX
Bachelor of Science December 2026
Major in Computer Science
Jonsson School Academic Success Scholarship
Relevant Coursework: Data Structures, Software Engineering; Operating Systems; Algorithms; Computer Architecture; Computer Networking

UNIVERSITY PROJECTS

Audio-Visual Content-based Viewport Prediction of VR Videos Aug 2025 - Dec 2026

- Managed a group of 6 students and developed a content-based viewport prediction from audio-visual prediction in equirectangularly projected 360 degree video while ensuring adherence to design constraints such as: Accurate viewport predictions, maintaining compute efficiency, and maintaining integrity to original spherical video.
- Managed a team of 6 students to develop a content-based viewport prediction system for equirectangular 360 VR video, meeting design contracts for accuracy, computational efficiency, and spherical video integrity.
- Optimized system performance to support compute-efficient inference under VR constraints by leveraging parallel CUDA core execution and model optimization via gradient-based learning on SalViT360 architecture.
- Researched and led selection of saliency prediction methods leveraging log-mel spectrogram representations to model audio saliency and map it to visual stimuli via CLAP.

Custom Compiler Project Aug 2025 - Dec 2026

- Developed lexical analysis using regular expressions to tokenize language symbols; including comments, characters, integers, floats, and strings.
- Verified and refined grammar rules, resolving ambiguous definitions through strongly defined grammar variants.
- Implemented intermediate language generation to support optimization and machine code generation.
- Designed abstract syntax tree structures and traversal logic.
- Implemented symbol tables, scope resolution, and static type checking , with diagnostic and verbose error reporting.

SQL Hospital Database Aug 2024

- Designed and implemented an SQL database to read, write, and update tables while following mock-up design specifications.
- Established SQL-injection resistant PHP queries from the frontend, with industry standard user-based access privileges.

Verilog ALU August 2024

- Collaborated in a team of 5 to design and implement an 8-bit Arithmetic Logic Unit(ALU) using Verilog following design specifications to support core arithmetic operations including addition, subtraction, and bitwise operations with carry-over propagation.
- Implemented status flags such as zero, overflow, and carry for error detection and debugging in a low level hardware description language, following fundamental CPU component design.

Peer to Peer Multiplayer Chess Web App Aug 2020

- Managed a group of 4 students and developed a multiplayer chess website powered by javascript, allowing users to connect from multiple devices and compete.
- Integrated a custom graphics library with dynamic CSS, server backend running on Node JS, and managed/documented changes using Github.

JOB HISTORY

Math and English Tutor Houston, TX
Best In Class Education 2018-2020 2024-2026

- Oversaw and led engaging lessons for three 75 minute class sessions with an 8 to 1 student teacher ratio.
- Facilitated learning environment for a variety of grade levels from 1st through 12th, ensured students ahead of their grade's curriculum.
- Led private tutoring sessions focused on helping students achieve scholastic goals in algebra and geometry including students with special education needs.
- Ran a 3 week long summer camp specialized in GT testing preparation supplemented with math and english enrichment classes.