Roei Kisous

Software Engineer - Google Cloud

Contact

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Education

2020 - 2022

MSc: Computer Science – Storage Systems • Technion, 91.4 GPA.

Clustering Based Data Migration in Deduplicated Storage under the supervision of Dr. Gala Yadgar.

Database systems – teaching assistant in charge.

2018 - 2020

BSc: Computer Science • Technion, 85.3 GPA.

Multiple Dean's List awards.

Experience

2025 - Current

Software Engineer • Cloud Security (SecOps) • Google, Tel Aviv, Israel.

- Leads the end-to-end migration of a GCP-based case management service for SOAR to a new, internal Google service built on Borg. Architecting the system from the ground up to enhance scalability and integration with internal infrastructure.
- Part of the Threat Hunt Agent initiative within Google SecOps, taking a lead role in leveraging Gemini to automate and facilitate advanced threat hunting capabilities for security analysts (featured at Google Cloud NEXT 2026).
- Engineered a high-throughput synchronization flow utilizing GCP Pub/Sub to bridge cloud-based case management with internal Borg services, ensuring high-fidelity data consistency across Google's global infrastructure.

2025 - Current

Freelance Researcher • Technion.

- Collaborating on advanced research in storage systems, specifically on SSD garbage collection algorithms.

2022 - 2025

Software Engineer • Cloud Storage • Toga Networks (Huawei), Tel Aviv Research Center, Israel.

- Conducted next-generation (N+2) research and developed PoCs for AI infrastructure acceleration, specializing in storage performance optimization. Authored multiple patents and publications and received the Huawei Future Star Award (2024) for technical excellence.
- Contributed to a high-performance key-value embedding store for AI, optimizing KV-Cache to support large-scale machine learning models and cross-functional AI infrastructure integration.
- Researched and implemented a new architecture for Huawei Cloud's file system, transitioning from (p)NFS to FUSE over virtiofs and offloading the backend to DPUs. Achieved up to a 75% reduction in resource usage, 14x throughput increase, and 50x latency improvement.
- Designed a near-memory processing architecture for block devices from the ground up, including a custom snapshot model and memory allocator. Optimized compute offloading to minimize network RTT, resulting in up to 25x speedup over conventional remote memory architectures.

2019 - 2020

Software Developer • Deep Learning Robotics, Caesarea, Israel.

- Developed a vision-based robotic controller using C++ and OpenCV, enabling robots to learn and replicate complex tasks through human observation.

Publications and Patents

The what, The from, and The to: The Migration Games in Deduplicated Systems • FAST 22.

- Data migration in deduplicated storage - Best paper runner-up; *Systor2022* highlight; *ACM Transactions on Storage (TOS)* Volume 18, Issue 4, Article 31 (Special Section on FAST 2022).

Near-Memory Processing Offload to Remote (Persistent) Memory • SYSTOR 23.

- Offload compute tasks to server side (memory adjacent).

Hardware AI Patent – Pending • 9/26.