NISÄN HARAMATI

Principal Software Engineer,
Distributed Data Systems

EDUCATION

B.Sc Physics (2012)
University of British Columbia

TECHNICAL SKILLS

Programming Languages

C, C#/.NET, C++, Clojure, Golang, Groovy, Java, JavaScript, Kotlin, pgsql, Ponylang, Python, R, Ruby, Scala, Shell, SQL, Visual Basic

Databases

Cassandra, ElasticSearch, InfluxDB, MSSQL, MongoDB, MySQL, PostgreSQL, RDS, Redis, GIS

Tools & Services

Ansible, AWS, Chef, Terraform, Docker, Druid, gerrit, git, Hadoop, Hive, IIS, Kayenta, Linux, Mantis, Puppet, Spark, Storm, SVN, Wallaroo

Specializations

Autonomous Vehicles
Big Data
Complex Event Processing
Containerization
Data Engineering
Data Systems Architecture
Database Design
Distributed Algorithms
Distributed Data Systems
Geospatial Data Systems
Greenfield projects
Infrastructure
Processing
Predictions
R&D
Risk Modelling
Site Reliability Engineering
Stream Processing

LANGUAGES

English (Fluent)
Hebrew (Fluent)

CONTACT

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ABOUT

I build and maintain large scale data systems in the real-time processing space, with a focus on resilience, data quality, correctness, and mathematical approaches. My strengths lie in my ability to approach both technical and product needs, applying long term strategy while providing short-term tactical benefits. A passion of mine is investing in community, mentorship, and skill-building for junior colleagues.

Beyond programming and data systems, I am interested in physics, mathematics, baking bread, reading, outdoor activities, and being active in my local communities (tech & non-tech alike).

CAREER HIGHLIGHTS & EXPERIENCE

Principal Distributed Systems Engineer, Service Infrastructure, Global Services Platform

SNOWFLAKE, INC. | JULY 2022 TO PRESENT

- Tech Lead for the Global Services Platform's observability tools, libraries, infrastructure, and workflows; ingesting 2 trillion events per day across logs, metrics, traces, and other telemetry channels; achieved $10m savings in the first year
- Reduced total production telemetry CPU load from 30% to 5%, freeing up vital resources for additional billable customer workloads
- Reduced network and storage volume by 50% each with compression and serialization improvements

Principal Software Engineer | Team Lead | Tech Lead

NVIDIA | NOVEMBER 2020 TO JUNE 2022

- Led a cross functional initiative to streamline and automate all fleet related operations, including software deployment and testing, route planning, vehicle and personnel scheduling, and real-time operations management
- Designed, deployed asset tracking & data lifecycle management systems
- Ensured all components of the fleet management system fully integrate to form a cohesive single pane of glass solution for managing all fleet related operations and concerns
- Automated the classification, planning, analysis, and labeling parts of the data collection and curation operations using geospatial data processing and analysis to increase the efficiency and scale of our operations
- Designed and built the data-driven layer of automation for data systems & data pipelines supporting large-scale ML/AI products
- Administered and maintained the geospatial data systems used for map-based classification, planning, and analysis
- Implement graph algorithms, GPU based parallel optimization, map matching, and geospatial processing
- Mentored and coached data engineers on multiple teams

Senior Software Engineer

NETFLIX | AUGUST 2019 TO AUGUST 2020

- Took ownership of a statistical analysis engine project, assessed its support needs and implemented a roadmap to bring it up to current support standards
- Identified and implemented new features to address new client requirements
- Designed and executed a testing methodology for evaluating changes to the statistical analytics engine, enabling use of a Continuous Integration process
- Co-managed the project with Open Source partners
- Worked on a large systems migration to move users from an aging system to a new platform (chaos and change automation) with improved stability and capabilities
- Supported remaining users while the old system was undergoing obsoletion and migrating to the new platform
- Liaise with Data Science Engineering to identify, implement, and evaluate new statistical methodologies

NISÄN HARAMATI

Principal Software Engineer, Distributed Data Systems

TRANSFERABLE SKILLS

Communication Skills

Code & design reviews
Creating, giving presentations
Documentation (internal & external)
Education & training
High production-value presentations
Interviewing candidates
Meeting facilitation
Mentorship & coaching
Product & feature advocacy
Project proposals
Public speaking
Sales engineering
Stakeholder alignment
Technical assessments
Technical leadership
Technical writing
Troubleshooting

Project Management Skills

Adaptive planning
Agile methodologies
Anticipating future needs
Delivery
Estimates
Information gathering
Priority setting
Reviews (code, document)
Requirements gathering
Execute short & long term projects throughout their full lifecycle
- discovery, conception & planning
- scoping, roadmap
- implementation, productionization
- maintenance, upgrades
- sunsetting

Assets

Clear & organized leadership style
Collaborative team contributions
Efficient, well-paced task management
Enthusiastic teacher and learner
Independent self-starter
Thorough diagnostic skills
User-driven perspective

FUN FACT

I once met the son of the father of GPS

CAREER HIGHLIGHTS & EXPERIENCE, CTD.

Distributed Systems Engineer | Chaos Engineer

WALLAROO LABS | DECEMBER 2015 TO JULY 2019

- Core contributor to Wallaroo, an open source, high-throughput, low-latency distributed real-time event processing framework written from the ground up in the Pony language.
- Worked on core functionality, testing & verification, metrics, telemetry, and instrumentation
- Built an end-to-end model-driven testing harness enabling chaos engineering, fuzzing, and generative testing
- Designed and implemented a distributed testing and property verification system for Wallaroo, allowing for rapid generation and execution of tests over thousands of topologies
- Performed R&D in testing and verification of distributed systems, using both empirical and formal methods which helped improve the resilience and reliability of Wallaroo
- Utilized risk modeling in complex systems using dynamical systems theory, identifying when the system transitions between predictable and unpredictable or chaotic behavior

Platform Engineer

COUNSYL | SEPTEMBER 2014 TO NOVEMBER 2015

- Redesigned the data systems architecture throughout the organization, reducing hardware footprint and enabling auditability and fine-grained access control as required by HIPAA
- Created database systems automation for deployment and administration, reducing maintenance and recovery related downtime
- Updated the data systems architecture and configuration to meet HIPAA compliance

Sr Software Engineer, R&D/Data Science, Data Ops Team Lead

PLENTY OF FISH | MAY 2010 TO AUGUST 2014

- Starting as a new grad software developer, and ending as a Senior Software Engineer, and Data Ops Team Lead, I ran Production and R&D projects for data science, IT, and product development.
- Designed, built, and maintained:
  - Database warehouses using MSSQL, PostgreSQL, and Cassandra, supporting both transactional and analytical workloads.
  - Distributed real-time event stream processing system, powering our IT infra's monitoring and diagnostics, alerting, dashboarding, and mitigation automation.
  - High performance JavaScript rendering engine for real-time animated visualizations of high volume data.
  - Distributed R execution engine for productionized data science workloads.
  - E2E test automation for Android devices, driving up to 50 simultaneous devices.
  - Automated ad creation, publication, analysis, and optimization, driving a budget of up to USD $100k/day.

Mentor

NPOWER.ORG | NOVEMBER 2021 TO APRIL 2022

- Technology career mentor guiding underprivileged and underrepresented members into the community to help them boost their career prospects and negotiating power in order to thrive.
- Guide and prepare mentees in skill boosting, goal setting, roadmapping, resume building and interviewing skills
- Coach mentees on programming and data science projects