

URJIT SINGH BHATIA

Software Engineer with 15+ years of expertise in high-performance computing, AI, & cloud platforms. Led cross-functional initiatives, mentored teams, and developed both technical and product strategies. Proficient in high-throughput scaling, backend & distributed systems, security, & legal compliance. Architected systems supporting 30M+ concurrent users.
Languages: English, Punjabi, Hindi, Gujarati, Urdu & beginner Norwegian.

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📍 San Francisco, CA

🔗 <https://urjit.io>

WORK EXPERIENCE

ClassDojo Inc

Staff Engineer - San Francisco

May 2015 - present

- Led AI initiatives, developing education-focused AI products.
- Built a streaming AI pipeline for fake account detection and content moderation.
- Spearheaded backend, security, infrastructure, performance tuning, and budgeting initiatives.
- Architected a seamless payment system upgrade with zero user impact and downtime.
- Designed a high-performance, image resizing service, reducing server instances from 80 to 6, significantly reducing large instance cloud costs.
- Eliminated 53ms DNS resolution delay-per-request with a custom Node.js cache, further optimized with CoreDNS.
- Developed a notifications infrastructure handling 500 million daily events across SMS, email, and push.
- Ensured GDPR and regulatory compliance, collaborating with third-party vendors and legal teams and onboarded the CISO and their team.
- Enhanced CI/testing infrastructure, achieving 4x speed improvements for backend and Android services.
- Established data analytics functions, collaborating on product strategy with PMs.
- Mentored teams, led scaling initiatives, and developed distributed systems aligned with business needs.
- Engaged in user research and represented the organization at industry conferences as a speaker and exhibitor.

Knewton

Senior Software Engineer - New York City

Mar. 2012 to May 2015

- Led development of Graph ingestion service handling concurrent graph operations and complex ontological validations.
- Implemented a novel 3-way graph data merge algorithm.
- Developed services which handled partitioned graphs containing 60-100k vertices, shared taxonomies clocking at 10's of GB of data distributed over multiple Cassandra servers involving optimistic node hops.
- Designed and developed a plugin-based load testing system capable of generating novel load profiles and replaying terabytes of production data.
- Member of team that developed service platform to handle nearly 700 transactions per second from partner's event streams.
- Developed automation toolchain for handling AWS stack deployment using CloudFormation & Boto.
- Scaled service platform by identifying performance bottlenecks and tuning caches.

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Software Engineer - New York City

Feb. 2011 to May 2012

- Developed platform services for partner integrations, trend forecasting & financial data processing.
- Responsible for technical communication with partners for business integration and API development.

- Designed and implemented credit card fraud detection protocol, with experience in PayPal, Mastercard, Amex, and Visa payment gateways

EDUCATION

Georgia Institute of Technology

Master of Science in Computer Science, 2010

Dec. 2010

Gujarat University

Bachelor of Engineering in Information Technology, 2009

June 2009

PROJECT

Cozgo

- CozGo is a Golang wrapper for Coz - a `Causal profiler` based on the paper:
- <https://www.sigops.org/s/conferences/sosp/2015/current/2015-Monterey/printable/090-curtsinger.pdf>
- Compared to traditional profiling highlights how to optimize hot-spots, `Cozgo` helps find what to optimize in a code base for the most ROI.

ChronoMQ

- ChronoMQ is a High-Throughput cancelable, delayed message queue inspired by the Beanstalkd protocol. Handles up to 30K RPS on commodity hardware with sub-millisecond ops latencies.
- <https://github.com/chronomq/chronomq>

Github

- See other projects at: <https://github.com/urjitbhatia>
- Read blog posts at: <https://urjit.io/posts>

SKILLS

- Cloud Platforms: AWS, GCP
- Backend Development: High Throughput Systems, Distributed Systems, ML Ops
- Machine Learning & AI: Data Analytics, AI, Transformers, PyTorch, OpenCV, LLMs, Vector Databases
- Languages: Go (Golang), Java, Python, Rust, Elixir/Erlang, C/C++, Bash
- Datastores & Tools: MySQL, Postgres, Redis, MongoDB, RabbitMQ, Docker, Hashicorp Suite, Git