Keshav Bathla

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Education

- **Jaypee Institute Of Information And Technology** — Noida, India
  Bachelor of Technology - Electronics And Communication Engineering — *July 2017 - May 2021*

Experience

- **Coinswitch: India's Leading Crypto Exchange** — Bangalore, India
  Senior Software Engineer — *January 2022 - Present*
  - **Market Making**: Developed a comprehensive market making system that has provided over $30 million in liquidity on the Coinswitch exchange, significantly reducing its reliance on external market makers. Engineered four Python microservices covering market making, hedging, and additional liquidity functions, all operating at 99.99% uptime.
  - **Portfolio Analysis Service**: Developed and launched a Portfolio Analysis Service for 20 million users, providing real-time insights into portfolio performance. The service features an analysis screen with a latency of approximately 400ms, enabling users to make informed decisions swiftly.
  - **FuturesTrade Service**: Developed a Go-based service for crypto derivatives (futures) contracts at Coinswitch, capable of processing around 50,000 orders per minute in high-volatility markets. Achieved 99.999% uptime with the 99th percentile order latency under 200ms.
  - **Payment Service Architect**: Developed a Go-based plugin within the Play Payments microservice, enabling seamless onboarding of any payment gateway through configuration. This configuration-driven payments ecosystem allows integration of new gateways in under 10 minutes, supports over 1,000 transactions per minute, and facilitates the addition of new asset classes within Coinswitch.
  - **Scalability** : Scaled and optimized over 10 microservices—including Trade, Exchange, Real-time Rates, Authentication, Payments, and Portfolio management—to support 20 million users. At peak, the system efficiently handled traffic from 1 million concurrent users with zero downtime, achieving a remarkable 99.999% uptime.
  - **Scaling Real-Time Crypto Rates Service**: Implemented and scaled a real-time event handling system for over 1,000 crypto contracts, efficiently processing price updates, order depth changes, and various other events. This robust solution supported up to 1 million concurrent users via WebSocket connections, ensuring seamless live data streaming.
  - **Leading Code Quality Improvement Initiatives**: Led and implemented a PR quality improvement pipeline to establish basic code quality standards across the organization, enhancing overall code integrity and preventing outages due to poor code.
  - **Unified Tech Stack Implementation**: Leveraged a robust technology stack—including Postgres, ElasticSearch, Redis, Kubernetes, SQS, and Redis Streams—to build scalable, resilient microservices across all projects at Coinswitch. This unified approach supported 20+ million users, processed millions of transactions daily (with up to 50,000 orders per minute in high-volatility environments), and ensured mission-critical operations with sub-200ms latency.

Blinkit (Grofers) — Gurugram, India
Software Engineer — *March 2021 - December 2021*

- **Consumer Engineering**: Working in consumer engineering team, responsible for displaying products on grofers app.
- **Product Listing Service Migration**: Migrating Product Listing Microservice from Python2 to Python3 and from Flask to FastAPI framework
- **Scaling**: Reduce latency of Product Listing Service from 1000 ms to less than 100 ms which helps to scale the service to more than 20M users
- **BugFixing and New Features**: Fix existing bugs on grofers app and implement new features like Instant Replacement for FNV items
- **Code Migration and Performance**: Migrate Grofers Tech Dept from Legacy service to new Product Discovery Microservice and improve performance of existing endpoints by removing bottlenecks

Oppia (Google Summer Of Code)/ Contributions — Remote
Student Developer — *October 2018 - June 2019*

- **Rendering Speed**: Reduce the rendering speed of oppia pages by 2 secs.
- **Upgrading Libraries**: Upgrade some 3rd party libraries without breakage of the codebase.
- **Contributed to Frontend and Backend**: Successfully merged 10+ pull requests.
- **Member of Various Teams**: Speed improvements, AngularJS Migration

Skills Summary

- **Languages**: Python, Javascript, Typescript, Go, C/C++, SQL, HTML, CSS
- **Frameworks**: Django, Flask, FastAPI, NodeJs, Gin
- **Tools**: Git, Github, Apache, Grafana, NewRelic, ElasticSearch, Redis, Prometheus
- **Platforms**: Linux, AWS, JIRA, Docker, Kubernetes
- **Soft Skills**: Leadership, Event Management, Public Speaking, Time Management
- **Computer Science Fundamentals**: Data Structures, Algorithms, System Design, Microservices, OOPS, DBMS, Operating System, Computer Networks,