Jhohev Sk

+1 (206) 593-9101 | sk.jhohev.us@gmail.com | linkedin.com/in/johev09 | github.com/johev09

SUMMARY

As a member of the Prime Tech Team at Amazon, I build tech solutions that improve the user experience of Prime customers worldwide. With over 7 years of industry experience in software engineering, I have delivered several large-scale projects that exceeded business goals and pushed the technical boundaries of distributed systems withstanding the massive demand of millions of customers non-stop. However, my core interest lies in exploring the low-levels of software, tinkering with threads, kernels, and CPU optimizations to unlock the full potential of systems.

EXPERIENCE

Software Development Engineer II — Nov 2021 – Present
Amazon (Prime Tech) — *Seattle, USA*

- Leading a 2-person team to improve customer engagement of a Prime rewards program through personalized ML-based product recommendations.
- Led a 3-person team to design, develop, and launch a global multi-step reward program for Prime Day 2024, handling peak traffic of more than 10,000 TPS and driving over 240k orders and higher customer retention
- Improved response time of customer eligibility service from 5s (p99) to 50ms by implementing remote distributed cache with AWS ElastiCache (Redis) Cluster, resulting in 99% reduction in customer-facing request timeouts.

Software Development Engineer II — Dec 2018– Nov 2021
Amazon (Retail Pricing) — *Bangalore, India*

- Automated manual operations using Selenium Webdriver that helped operations team complete a week (5 days) of work in few (2-3) hours.
- Built automated experimentation tool that tested, evaluated and launched new configurations in 5-10 minutes which previously took a day (8 hours) of manual effort by operations team.
- Mentored SDE-Is, providing guidance that led to their successful promotions.

Software Development Engineer I — Sep 2017 – Dec 2018
Amazon (Retail Pricing) — *Bangalore, India*

- Developed a highly-responsive Electron-based desktop tool (replacing existing slow Firefox add-on) with feature improvements like pre-fetching, multi-instance, zero-click auto-updates, etc., that drastically increased operation team's productivity from spending 5 minutes on each work item to just few seconds.
- Enhanced performance and reduced latency of a work allocation tool that processed GBs of data daily, enabling efficient task assignment for an operations team of over 200 members.
- Mentored a couple of SDE interns on their projects, leading to full-time job offers.

Software Development Engineer - Intern — Feb 2017 – Jul 2017
Amazon (Retail Pricing) — *Bangalore, India*

- Re-designed and developed data warehouse solution to support report generation for write-heavy traffic, processing over 1TB/day of large-scale data. Reduced query time from 1 day to few minutes that helped internal operations team complete their analysis in days that previously took weeks/months. Optimized queries by partitioning the data at the day level using Amazon EMR (MapReduce with Apache Hive and Hadoop) loading data from S3 published by worker instances processing data streams from SQS.

TECHNICAL SKILLS

As a software engineer with over 7 years of real-world experience, I have designed and delivered various large-scale **distributed systems** involving **microservices**, web applications, and workflows that continuously serve high peak traffic from millions of customers. Through these projects, I have gained expertise in every stage of **Software Development Lifecycle (SDLC)** maintaining high standards in **operational excellence**. I have learned to improve code performance, readability, modularity, and extensibility by applying best practices of **software design patterns**. I have learned to make services more **resilient and fault tolerant** through design choices like availability zone replication, distributed rate-limiting / throttling, and circuit-breaker. I have built diverse **monitoring solutions** for these systems through auto-generated metrics, alarms, and dashboards. I have adopted efficient **DevOps** approaches for safe auto-deployment of changes to production by following the standard practices of **Continuous Integration / Continuous Deployment (CI/CD) pipeline**, including **Integration Testing**, **Stress Testing**, **Chaos Testing**, **OneBox stages**, **Rollback**, and more.

Beyond work, I enjoy exploring the latest developments in **Machine Learning (ML)**, **Web Dev**, and **System Design**, which inspires me to develop new ideas. Some of my skills and experiences are mentioned below.

Programming Languages: Java, Python, Javascript, Kotlin, C#, C/C++, Lua

Java Dev Tools: Async / Reactive Programming, CompletableFuture, Netty, Apache Tomcat, Guice, Spring, JUnit, Mockito, Smithy, IntelliJ, Eclipse, NetBeans

Javascript Dev Tools: Electron, Node.js, Typescript, React, Express.js, AngularJS

Python Dev Tools: TensorFlow, PyTorch, cuda, Scikit-learn, SciPy, OpenCV, Open3D, Numpy, Pandas, Matplotlib, Seaborn, Streamlit, Conda, pip, Google Colab, Jupyter Notebook

Other Web Dev Tools: Selenium Webdriver, PHP, CSS Module, SCSS, Bootstrap

Android Dev Tools: Android Studio, Retrofit, OkHttp, Butterknife, Dagger

Build Systems: Apache Ant, Maven, Gradle

AWS Tools: AWS CDK (infrastructure-as-code), AWS CloudFormation, S3, SNS, SQS, AWS CloudWatch, Amazon Kinesis, Amazon Firehose, AWS Elastisearch with Kibana (now OpenSearch), Amazon VPC, Amazon Route53, AWS Lambda

Database and Tools: DynamoDB, Amazon EMR, Amazon Redshift, AWS Glue, AWS Athena, Amazon RDS, Amazon Aurora, MongoDB, MySQL, Apache Spark, Apache Hive, Apache Hadoop, AWS Data Pipeline

Caching: Amazon ElastiCache, Redis, memcached

Markup Languages: Markdown, HTML, XML, LaTeX

OS: MacOS, Linux distributions, Microsoft Windows

Other IDEs: Visual Studio Code (VSCode)

Version Control Systems: Git

Container Tools: Docker, Amazon ECS (similar to Kubernetes)

API Architectures: REST, RPC, WebSocket, Server-Sent Events (SSE)

Other Tech Stacks: MERN, MEAN, XAMPP

PROJECTS

PlayOnTop
- Developed a **Electron-based** desktop video player app with AngularJS to play Web/Local videos as a small floating player on top of all windows.
- Developed a **Chrome extension** to open YouTube videos in Picture-in-Picture (PiP) mode in the desktop app and including all default YouTube features.

Click List
- Developed **Chrome extension** *click-list* for chrome users to share links with each other.
- Hosted backend server with **NodeJS** (Click-List-Server) and **WebSockets** to notify changes to users.

DISARM (ITRA Govt Project NIT DGP)
- Developed Web application to extract coordinate information for offline representation (WKT) of an area using **Google Maps API**
- Simulated Delay Tolerant Network (DTN) by modifying open-source ONE Simulator
- Developed **Android** app to collect survey for research

Technoshine X.5
- Developed website to promote fest organised by university club CAD (Centre for Application Development)
- Used **XAMPP** as stack and had basic authentication for registration, login, and an online game Nethunt.
- Developed **Android app** for the same.

EDUCATION

Master of Computer Applications (MCA) 2014 – 2017
National Institute of Technology (NIT) Durgapur *Durgapur, India*

Bachelor of Science (B.Sc.) (Honours), Computer Science 2010 – 2013
University of Calcutta *Kolkata, India*

AWARDS, ACHIEVEMENTS & ACTIVITIES

- Organized 2-day Amazon Prime Hackathon in North Carolina A&T University attended by 48 students in 2022.
- Won 1st Prize in Hackathon organized by Amazon Retail Pricing Team in 2020.
- Awarded the *Retail Pricing Tech Special Annual Award for Customer Obsession* in 2020.
- Recognized with the *Extra Mile* Award in Jun and Dec 2020 for my self-driven optimizations.
- Awarded the *SPS Day 1 Award* in 2019 by *Retail Pricing* org for significantly reducing operational time and costs.