

Mandeep Kaur

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WORK EXPERIENCE

Senior Software Engineer II, Altruist Corp

06/17/2025 - Present

- Developing complex financial calculations and algorithms to enable accurate and real-time performance reporting, portfolio analysis, and risk assessment.

Senior Software Engineer, Vice President, BlackRock

01/01/2025 - 06/16/2025

- Providing support for optimization tools and critical service ensuring smooth operation and timely issue resolution.
- Designed scalable backend systems, enabling real-time portfolio optimization & reducing rebalancing time by 90%.
- Developing core investment functionalities for portfolio managers, enhancing system resilience and stability through rigorous code reviews and extensive unit, regression, and user acceptance testing.
- Working with cross functional data teams to define technical architecture for new scalable features, integrating tools like **Azure Blob Storage** for high-volume data ingestion.

Software Engineer III, Associate, BlackRock

01/01/2024 – 12/31/2024

- Led the migration of Angular based application to micro-frontend architecture and establishing best practices.
- Streamlined data ingestion workflows, improving processing throughput by 40% and reducing operational costs.
- Led the development of in-house solutions to use prompt-engineering/GenAI to generation optimization cases.
- Collaborated with global engineering team to integrate advanced optimization tools, streamlining portfolio management workflows.

Software Engineer II, Associate, BlackRock

03/21/2022 – 12/31/2023

- Designed & implemented Ingestion Service, enabling portfolio managers to customize & automate data ingestion.
- Integrated new storage solutions like Azure Blob for cost-effective and efficient data handling.

Software Developer Engineer I, Associate, NextEra Analytics

04/10/2021 – 03/18/2022

- Collaborated with the product team to design scalable architecture and automate migration of millions of geospatial data rows, reducing processing time by 40%.
- Developed **full-stack application** for processing and rendering **geospatial data** and data formats (geojsons, kml).
- Built interactive maps using **Leaflet.js**, improving user decision-making efficiency.
- Integrated different ArcGIS data on map to reduce customers' decision-making time **from 6 weeks to 2 days**.
- Optimized processing and rendering of large-scale geospatial data, both on client and server side.
- Collaborated with team to improve response times of geospatial queries from **PostGIS** database.

Associate Software Developer Engineer, NextEra Analytics

09/10/2018 – 04/09/2021

- Used **Terraform** and **packer** to automate deployment of **AWS** resources (ECS, Lambda).
- Worked on building large-scale serverless web apps for modeling energy usage utilizing 20+ **microservices**.
- Built & integrated **Grafana** dashboards for monitoring health of services. Used Kapacitor to generate alerts.
- Worked as a core member of the **Site Reliability Engineering** team to sustain and troubleshoot legacy products.
- Researched and made suggestions for new technologies to implement as a member of the SRE team.
- Built reusable python packages & terraform modules, improving developer productivity substantially.

Software Engineer Intern, Pyze Inc.

02/13/2018– 09/09/2018

- Implemented various **webpage optimization** techniques like Minifying JS files.
- Integrated feature of offline web applications, progressive web applications using **Indexed DB**.

Software Engineer Intern, Toyota ITC, USA, Inc.

02/12/2017– 05/19/2017

- Developed benchmark model of a system with autonomous functionality using **neural networks** with **92%** accuracy.

TECHNICAL/KEY SKILLS

Language

Java, JavaScript, Python, TypeScript

Framework & Libraries

Spring, Node.js, Vue.js, Leaflet, gRPC, Protobuf, Numpy, Cypress, Chai, Mocha

Tools

Git, Maven, AWS (ECS, Lambda, API Gateway, EC2, SQS), Terraform, ADO, Grafana

Database

Postgres, MySQL, MongoDB, Firebase, Indexed DB