Pahuldeep Singh

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EDUCATION

Georgia Institute of Technology   **Atlanta, GA**

Master of Science: Computer Science (In Progress)

Relevant Coursework: Machine Learning, Deep Learning, Advanced Algorithms, Software Architecture, Cloud Computing.

University of Winnipeg   **Winnipeg, MB**

Bachelor of Science (Honors): Computer Science   *Graduated: 2024*

Relevant Coursework: Data Structures & Algorithms, Operating Systems, Database Systems, Software Engineering, Computer Networks, Artificial Intelligence, Web Development, Human-Computer Interaction, Computer Architecture.

Northern College   **Toronto, ON**

Diploma: Computer Engineering Technology with Honors   *Graduated: 2020*

Relevant Coursework: C++, Data Structures, Databases (SQL/MongoDB), Web Dev (HTML/CSS/JS/Node), OS, Networking, Software Engineering, Visualization, Systems Design.

WORK EXPERIENCE

Calian Advanced Technologies   **Winnipeg, MB**

Senior Full-Stack Engineer   *June 2022- Present*

- Designed and maintained scalable ETL/ELT pipelines with Python, DataFlow, and BigQuery, processing millions of structured and semi-structured records daily with high reliability.
- Built and optimized backend services and data-centric libraries in Python and Node.js/TypeScript, improving system performance and developer productivity.
- Developed data ingestion frameworks to integrate with third-party APIs (e.g., KYC/KYB with Persona, fraud/compliance with Sardine, authentication with Stytch), ensuring secure and accurate data availability.
- Implemented robust data modeling, schema evolution, and governance practices, enabling reliable analytics and regulatory compliance in FinTech and Web3 domains.
- Deployed Terraform-based Infrastructure as Code for GCP resources, streamlining provisioning and ensuring reproducible, secure cloud infrastructure.
- Designed high-availability data architectures on Google Cloud Platform (DataFlow, BigQuery, Cloud Storage, Pub/Sub) to support APIs, ledgers, and compliance reactors at scale.
- Automated testing and CI/CD pipelines with GitHub Actions and GCP tools, reducing deployment time by 40% and increasing release confidence.
- Mentored junior engineers in data engineering best practices, including pipeline optimization, schema design, and API integration, strengthening team capability.
- Applied knowledge of FinTech, blockchain, and Web3 ecosystems, bridging decentralized finance concepts with traditional data governance requirements.
- Built containerized microservices with Docker and Kubernetes, ensuring portability, scalability, and efficient orchestration of data workflows.

Valley Fibers   **Winkler, MB**

Full-Stack Developer   *Aug 2020 - June 2022*

- Engineered real-time network monitoring tools using React.js, Node.js, and Express, improving frontend stability, responsiveness, and user experience.
- Developed and tested cross-platform mobile UIs with React Native and Flutter for internal Android and iOS monitoring applications.
- Led backend development with Python (FastAPI) and Node.js, integrating secure React (TypeScript) frontends and modular REST APIs for scalable, maintainable microservices architectures.
- Built and enhanced internal systems using C# and .NET Core, improving observability dashboards and overall development efficiency.
- Automated ETL data pipelines with Python and Apache Airflow, ingesting data from APIs and increasing analytics accuracy by 40%.
- Optimized PostgreSQL and MongoDB databases, improving query performance by 35% and reducing load times by 20% through indexing, query tuning, and schema design.
- Developed multi-tenant, role-based access control (RBAC) APIs secured by OAuth 2.0 and JWT, enabling enterprise-grade authentication and secure third-party integrations.
- Implemented comprehensive observability solutions using Grafana, Prometheus, and alerting pipelines, reducing mean time to detect (MTTD) and mean time to resolve (MTTR) incidents by 25%, enhancing system reliability and uptime.

- Integrated log aggregation and monitoring using ELK stack components (Elasticsearch, Logstash, Kibana) to support incident investigations and proactive monitoring.
- Participated in continuous integration/continuous deployment (CI/CD) workflows, automating builds and deployments to cloud environments, improving release quality and speed.

SKILLS

Languages & Front-End: Python, JavaScript (React, Node.js, TypeScript), Java, C++, C#, Swift, PHP, HTML5, CSS3, Tailwind CSS, Bootstrap

Backend & Frameworks: Flask, Express.js, Spring Boot, .NET Core/6, RESTful & GraphQL APIs, Shopify, Shopify 2.0, Web Scraping

Cloud & Infrastructure: AWS (Lambda, S3), Azure, Docker, Kubernetes, Terraform, CI/CD (GitHub Actions, Jenkins)

Databases: PostgreSQL, MongoDB, MySQL, Oracle

Security & Testing: JWT Authentication, OAuth 2.0, OWASP Security, HTTPS, Role-Based Access Control (RBAC), Jest, Mocha, Postman, Swagger

Tools & Methodologies: Git, GitHub, VS Code, JIRA, Trello, Power BI, Agile/Scrum, iOS Development

CERTIFICATIONS

- AWS Solutions Architect – Associate (Issued: 2023)

- Cisco Certified Network Associate (CCNA) – 200-301 (Issued: 2022)

- CompTIA A+ (Issued: 2021)

- React – The Complete Guide (Redux, Next.js, etc.) – Udemy (Issued: 2022)