




# CHIRAG NATH

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## WORK EXPERIENCE

- Endor Labs, Software Engineer**, Palo Alto, CA | Go, MongoDB, Azure, Bazel, Kubernetes **Mar 2024 - Present**
- **Designed and implemented** an automated ingestion system for OSS package versions, **improving data quality** for over **45,000** customer projects and enabling **real time change impact analysis**.
  - **Optimized** patch generation for customer facing vulnerability management, reducing code volume by over **50%** and minimizing breaking changes, resulting in trustworthy critical vulnerability fixes for high profile customers.
  - **Developed a language detection module** for Falcon, using manifest file analysis and directory traversal, improving data accuracy and reducing build failure rates across customer repositories.
  - Orchestrated containerized applications using **Kubernetes** and implemented IaC using **Terraform** for deployment.
  - Implemented robust **Authentication** mechanisms(OAuth, API key) and secure **networking protocols** (HTTPS) to ensure data integrity and encryption in transit.
  - **Accelerated** development cycles by creating custom **Bazel** rules, significantly reducing build times.
  - **Led** research initiative on **SAST** tools, leading to the strategic implementation of custom rules.
  - Architected **scalable microsystems** using the fx framework and Protocol Buffers ensuring efficient data serialization and inter-service communication.
- Stealth Startup, Software Engineer**, San Jose, CA | Python, Java, SQL, Docker, Kafka **Dec 2022 - Feb 2024**
- **Engineered** and maintained a real-time **Change Data Capture pipeline** of the data integration platform, enhancing **customers** ability to process and synchronize data in **real time** .
  - Developed a high performance **Fast API** for file processing, enabling efficient data management and monitoring.
  - Optimized a Machine Learning pipeline with **Apache Spark** giving the ability to accelerate data ingestion by **70%**.
  - Automated large scale data acquisition using **RestAPIs** and crontab, enhancing networking capabilities.
- Alphaniti, Software Engineering Intern**, Remote | Python, MySQL, MongoDB **May 2021 - Sep 2021**
- Conducted **financial analysis** using Apache Spark enabling **large scale data processing** of over **900** companies, enhancing product value proposition for enterprise clients.
  - Developed custom visualizations in **PowerBI** and implemented efficient data connectivity with **PostgreSQL**, creating a robust analytics dashboard, enhancing ability for **data-driven decisions**.
- Merck, Software Engineering Co-op** West Lafayette, IN | Python, Snowflake **Jan 2020 - Jan 2021**
- Leveraged **SQLAlchemy** to optimize database interactions, resulting in improved query performance.
  - Architected and implemented REST APIs using **Flask**, enabling seamless data exchange between microservices.
  - Served as the scrum master, guiding and **mentoring** a team of **5**.

## PROJECTS/CERTIFICATES

- **Microservice Database Engine**   
Aggregates data into a unified model prioritizing **security** measures using **Azure**, **Python** and **Kubernetes**. Implements **Authentication**(OAuth, API key, Basic), **HTTPS** with **TLS 1.3** and **RBAC**.
- **Bank Lending Prediction Model, Kaggle Competition**   
Predicted defaulters with an accuracy of **78.3%** and MCC of 0.23
- **Data Streamer**   
Implements **Apache Airflow**, **Kafka**, and **Spark** to stream and process data in real-time from an external **API**.
- **Dependency Analysis, Vulnerability Management, Google Data Analysis Certificate, SnowPro Core**

## SKILLS

- Java | Python | Go | SQL | Redis | Bazel | Protobuf
- Git | MongoDB | Azure | Docker | Kubernetes
- REST APIs | OOP | ETL | IAM | OAuth2.0 | OIDC | RBAC
- Microservices | Distributed Services | Integration testing | Unit testing

## EDUCATION

Purdue University, West Lafayette, IN

*B.Sc Data Science, a minor in Economics*