Jacob Williams

Delivering Fullstack Solutions

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EXPERIENCE

Slync, Ottawa— *Software Developer L2*

NOV 2021 - PRESENT

Optimized dashboard load times by improving caching strategy. Combined results from Redis, Postgres, & MongoDB for accurate and 200% faster load times. Created a Kibana fork for customized dashboard experience. Added RBAC to Elastic for improved security. Replaced Pentaho with Logstash which reduced costs for ETL tools by 80% and increased development velocity.

Carlson Software, Ottawa— *Sr. Software Developer*

JAN 2019 - NOV 2021

Use Rust, C++, Typescript, and React to deliver optimized solutions for resource estimation, mine planning, and digital twin solutions. Developed and Deployed Machine Vision Algorithms for IOT bulk inventory measurement and used React, Node, GraphQL, Oracle DB, Cassandra, and Kubernetes to create associated web portals. Delivered a desktop blasting package with cloud integrations using Electron, React, Typescript, Node, Rest, MongoDB, and Redis.

Heritage Crystal Clean, Chicago— *Jr Project Engineer*

SEP 2015   JUN 2017

Managed a portfolio of projects for the Waste Oil Recycling Facility. Developed python dashboards using pandas and matplotlib for visualizing processing plant production data.

EDUCATION & PUBLICATIONS

McGill University, Montreal— *Masters Mining Engineering*

JUL 2017- DEC 2018

Used ML to solve mine planning optimization problems. Created discrete optimization tools for robot path planning. Focused on Genetic Algorithms and CNN's

McGill University, Montreal— *Bach. Mining Engineering*

SEP 2010 - AUG 2015

Exploring Deep Learning for Dig-Limit Optimization in Open-Pit Mines — *Lead-Author, Journal of Natural Resources Research, 30, 2021*

Optimizing Ore–Waste Dig-Limits as Part of Operational Mine Planning Through Genetic Algorithms — *Co-Author, Journal of Natural Resources Research, 25, 2016*

SKILLS

Languages
TS, JS, Rust, Python
C/C++, Go, CSS, HTML

Frontend
React, NextJS, Yew,
Redux, Mobx, AntD,
D3, i8n, Figma

Backend
Node, Express, NestJS
GraphQL, REST
Actix, Logstash, ELK

Database
PostgreSQL
MongoDB, Elastic,
Prisma, Redis

Testing
Jest, Cypress,
Storybook,
Google Test

Dev Ops
Terraform
Gitlab Pipelines,
Github Actions
Azure Pipelines
Docker, Kubernetes

Cloud
GCP, Azure, Oracle
AWS–CCP
KCNA Certified

Build Tools
Bazel, Lerna, CMake,
Nx, Yarn Workspaces

ML
Tensorflow, Keras,
Pytorch

OS
Windows, Mac, Linux

Citizenship
US, Canada