

Luke J. Pereira

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Employment

Amazon (*Software Development Engineer*)

March 2021 - April 2022

- Full-stack development to support inbound transportation initiatives within the Fulfillment by Amazon organization. Worked on Java microservices, React UIs, data warehouse pipelines, and infrastructure and DevOps.
- Led a project for managing disruptions and updates to inbound shipments. Created low-level design and contributed to substantial portion of implementation involving integration with existing architecture for tendering trucks.
- Led projects for migration and launch of two legacy applications (shipment tracking and seller settings pages) from Perl Mason to new React UI and Java REST APIs while improving test coverage and maintainability.

BenchSci (*Full Stack Software Engineer*)

July 2017 - December 2019

- As an early member of the team, I contributed to creation of the React web app as well as the Python and NodeJS APIs for the reagent search engine used by thousands of scientists at the top pharmaceutical companies.
- Contributed to rewriting the core Elasticsearch API, decreasing some response times by upwards of 10x and improving test coverage maintainability. Synchronized ES cluster with ML bioinformatics pipeline and Neo4j DB.
- Developed SOC2 compliant integrations and performed acceptance testing. Implemented SAML SSO, MFA, Ariba procurement checkouts, ecommerce APIs, payment flow UIs, BigCommerce automation tools.

Contract and Freelance

January 2012 - present

- Developed React Native mobile app for mental health focused alpha stage startup (*Animi*).
- Set-up GCP compute and Kubernetes deployments for social-network alpha stage startup (*EventReach*).
- Developed C++ software for secure and robust radio frequency communication between two Arduino microprocessors used to detect malfunctions in hydraulic lifts: <https://git.io/Jkmmw>.

Education

University of Toronto (*Honours Bachelor of Science*)

September 2015 - April 2020

Computer Science and Mathematics Double Major

Final Year GPA: 3.75

York University (*Art Fundamentals Certificate*)

January 2012 - August 2013

Personal Projects

CloudFund

<https://github.com/lukepereira/cloudfund>

A React app with a Flask API used for crowdfunding and maintaining cloud resources and deployments. Using Stripe to process funds, Kubernetes to manage clusters and deployments, and the GitHub API for config versioning.

TF Classify

<https://ply.gl/org.tensorflow.app>

An Android app that uses Googles Inception neural network model to classify camera frames in real-time. Built from open-source code, it has accumulated over 12,000 installs in the Google Play Store.

Skills

Languages and Frameworks

Python, Java, Golang, NodeJS, C/C++, LISP
ES6 JS, React, Redux, Sagas, Selectors
REST, Flask, gRPC, GraphQL
TensorFlow, Pytorch, scikit-learn, numpy

Database Technologies

SQL, Dynamo, RDS, Elasticsearch, Neo4J, Mongo

Cloud & Infrastructure

AWS, GCP, Docker, Kubernetes, Serverless
Terraform, Ansible, Envoy, OpenCensus

Notable Courses and Knowledge

LaTeX: <https://git.io/JfwkR>

- **Computer Science:** Advanced Data Structures & Algorithms, Neural Networks & Machine Learning, SCRUM & other SDLC, Information Security, Distributed Systems, DevOps, Git, Unix, Performance Analysis, Stochastic Networks & Queuing Theory, Databases, OS & Computer Organization
- **Mathematics:** Statistics & Probability Theory, Differential Geometry, Gauge Theory, Combinatorics, Number Theory, Advanced Graph Theory, Multivariable Calculus, Differential Equations (ODE, PDE), Dynamical Systems, Linear Algebra, Abstract Algebra, Topology, Group Theory