

ROBERT NICHITA

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Key Skills

Languages	C/C++, JS/HTML/CSS, Java, Python, Elixir, Haskell	Databases	MySQL/PostgreS, JDBC, MongoDB
Backend	Node.js/Express.js, Django, Phoenix, Spring/Spring Boot	Auth	Oauth2, Keycloak, Passport, JWT
Frontend	React/Native, Angular11, Apollo, Axios, REST, GraphQL	Vers Ctrl	Git & Github/Bitbucket, SVN
Cloud	AWS IAM, EC2, SQS, SNS, Lambda, Glue, Quicksight BI	DevOps	Docker, Gradle, Maven, Nexus
Monitor/Log	Prometheus/Grafana, ArgoCD, ElasticSearch, Kibana	Style	Prettier, Pylint, ESLint, CheckStyle
Teamwork	Agile, JIRA, Confluence, Quick Learner, Independent	Distributed	RabbitMQ, Memcached



Education

University of Toronto, Sep 2018 - Aug 2022

Honours Bachelor of Science, Computer Science Specialist (Software Engineering Stream) - 3.45 GPA

Operating Systems

Aug 2022

- Applied complex synchronization, memory management and parallelism, improving the PintOS Operating System.

Engineering Large Software Systems

Apr 2022

- Analysis of software design in scikit-learn and contributing several bugfixes/features
- Study of architectural/design patterns, Requirement analysis and testing methodology

Introduction to Machine Learning

Feb 2020

- Learned fundamental techniques of data engineering and algorithms for supervised learning and clustering.



Work Experience

Hybrid Cloud Developer, Caseware Inc.

January - August 2021

Transformed client accounting data into user-readable format. Ingested said data into Business Intelligence platform formats for use by various clients, future-proofed to support previous internal data formats and continuously migrate more client data as it is created until clients eventually fully move from desktop into the cloud.

- Created python scripts to perform ETL jobs on big data using Pandas and Spark running on AWS Glue Jobs
- Transformed csv data from AWS S3 into parquet filetype via python scripts run on AWS Lambda triggered by EventBridge messages. Automatically validated that the files had been converted
- Created AWS Athena push notification listener in Spring Boot to avoid long polling for query result sets
- Wrote deployment config in Serverless and Terraform. Performed deployments with DevOps team.
- Designed and Implemented scheduled data ingestions from S3 through Athena into AWS Quicksight Datasets with automatic validation for successful ingestions. System is extensible to an event-triggered ingestion rather than a scheduled ingestion for streaming files when Quicksight adds partial ingestions

Software Developer, Altairix Inc.

September - December 2019

Developed e-learning assessments for children with learning deficits, based on the client's hand-written assessments.

- Developed Java service calls on a service-oriented architecture to handle REST requests
- Implemented internationalization and localization features for client's future global users.
- Performed UAT with clients before releases, developing up to 3 consecutive releases at a time.
- Used a custom ORM for CRUD operations in MySQL, facilitating data persistence for these service calls
- Designed User Interfaces, and implemented them using the google web toolkit (GWT), styled with CSS
- Designed a new webpage element for the company's development framework. Presented the element's design and functionality to the partners for review and feedback. Later implemented this element on a webpage.
- Handed over in-progress work to other employees at the end of work term with instructions

Independent Contractor, KitchenMate

Aug 2018

Manufactured various parts and assembled them into a Smart Cooker

- Participated in daily standup, suggesting improvements to manufacturing workflow and business practices.

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University Projects

Github Repository Visualization SAAS

January - April 2022

- Created JS GraphQL api using Apollo Server/Client. React / Tailwind CSS Frontend
- Authenticated users to Github using PassportJS OAuth2 framework
- Authorization done for private Repository access and limited video sharing

Food Service Webapp

July - August 2021

- Dockerized Django backend, Angular frontend and Nginx reverse proxy to facilitate reproducible builds between development and production builds. Configured bridge network to allow proper reverse-proxy functionality between containers
- Created AWS EC2 instance for remote server with appropriate security groups for our deployment to run securely. Assigned Elastic IP to keep instance at the same address over time making deployments simpler.
- Created framework for seeding databases with randomly generated data based on the Faker library, with an emphasis on making it easy to add and change seeding algorithm based on new database schemas.
- Implemented chunked file uploads to allow arbitrarily large file uploads for videos. Uploading to Google Media Storage to avoid filling small free storage space in EC2 instance
- Led Scrum process with Jira task board and automated reporting to keep track of team progress.



Personal Projects

PetSprout - Habit building mobile app, backend tech lead

Dec 2021 – Mar 2022

- Developed using MERN stack with Expo for building to Android/iOS from React Native
- Recruited mid-project as backend tech lead in order to enforce proper design, architecture, code-style, documentation and testing practices.
- Perform Dev-Ops and operational roles relating to backend operations. Handling server configuration, deployment, and introduce CI/CD pipeline.
- Manage a team of 3 other backend developers. Using Kanban methodology to organize tasks. Conferencing with other leads to gather requirements and provide direction in regards to backend design.

Ingest - Hack the valley 4 submission

Feb 2020

- Top 10 hackathon submission at <https://devpost.com/software/kjdshdkja>
- Created a backend server using expressjs for a news aggregation webapp.
- Integrated with python keras machine learning script from js backend, allowing for multiple asynchronous calls in parallel.

Doodle Jump Game

June 2017

- Created 3D C++ based clone of doodle jump using OpenGL library.
- Implemented 3D model parser and loading algorithm in C++ for 3D models stored in the .OBJ filetype which allowed for better looking assets and faster framerates than polygon stitching techniques learned in class for rendering complex 3D objects.



Extracurricular Activities

FIRST Robotics Team 1334 Programming Lead

September 2016 - June 2018

Oakville Trafalgar High School, Oakville, Ontario, Canada

- Created control systems for Linux based robots, organizing the Java, Python and Bash codebase in Git
- Developed image processing and sensor integrations for autonomous control of robots
- Trained and managed junior programmers
- Made presentations to sponsors explaining programming achievements raising \$5000
- Provincial Quarter - Finalists in Ontario 2018