

Dishu Lyu

PERSONAL INFORMATION

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Portfolio: lesterlyu.github.io
GitHub: github.com/LesterLyu
LinkedIn: linkedin.com/in/lesterlyu

EDUCATION

University of Toronto

A&S BACHELOR'S DEGREE (2015 - APRIL 2020)

Computer Science Specialist + Statistics Minor

- Focus on Web and Internet Technologies
- Focus on Artificial Intelligence

SKILLS

Programming and DB

C, C#, JAVA, JavaScript (Node & Browser), Python, Shell, SQL, NoSQL, SPARQL, RDF (Ontology)

Framework & Library & Other

Node.js, React.js, React Native, Express.js, Django
HTML5, CSS, Git, Github, Docker

TECHNICAL QUALIFICATION

- Experienced in Web Full Stack Programming (Node/Python + React + MongoDB).
- Design and implement RESTfull APIs.
- Write well-covered testable code.
- Develop and publish open-sourced library to NPM.
- Experienced in Shell Scripting and Docker.
- Continuous integration & deployment through GitHub CI with AWS EC2 + AWS CodeDeploy + Docker, or GitHub CI + any VPS + Docker.
- Deploy and maintain customized mailing server with a custom domain and passes all security checks.
- Develop Android App and Publish to Google Play Store.

WORK EXPERIENCE

Software Engineer

University of Toronto, Department of MIE
MAY 2021 – PRESENT

Develop software for translating data into ontologies (CSV to JSON-LD).

Develop a Python object-relational mapping library that connects to a Graph Database (i.e. GraphDB) via SPARQL endpoint. Classes & properties & instances defined in the graph database can be mapped into Python Objects/Classes. Searches and customized SPARQL query are also available.

Forked from an open-sourced library [owlready2](#) that uses SQLite as an internal store instead of a real graph database in the [forked version](#).

Develop Social Need Marketplace web platform that uses the above ORM library and Graph Database.

Translate competency questions into SPARQL query. Implement machine and planning algorithms that match client needs to social services using Ontology.

Junior Web Developer

University of Toronto, School of Cities
MAY 2020 – APR 2021

Architect and develop the [mixed-use matching platform](#) from scratch. Build with Node.js, Python, React.js, GraphDB, MongoDB.

Research Assistance (Part-Time)

University of Toronto, Department of MIE
JANUARY 2020 – APRIL 2020

Develop Social Need Marketplace web platform. Build with React.js & Django & Postgres. Redesign the front-end and implement bug-fixes on the back-end.

Software Developer Internship

Ontario Ministry of Health and Long-Term Care
SEPTEMBER 2018 – AUGUST 2019

R&D a generic data collection tool using MS Excel like web interface. Involves in real time formula parsing and evaluating in the browser runtime.

Software Developer Co-op (China)

Xiamen Dnake Intelligent Technology Co., Ltd.
JUNE 2016 – AUGUST 2016

Port C++ code into a JAVA web application with Spring MVC framework.

PUBLIC OPEN-SOURCED PROJECTS

The following projects are available on Github.

2021 **Owlready2**

Owlready2 is a library for ontology-oriented programming in Python. It can manage ontologies and knowledge graphs in a graph database, i.e. GraphDB, connected through SPARQL endpoint. It can also be used as an ORM (Object-relational mapper). Classes & properties & instances defined in the graph database can be mapped into Python Objects/Classes.

Forked from [jibalamy/owlready2](#) that uses SQLite as an internal store instead of a real graph database.

2021 **Course Oracle**

A blockchain hackthon project. Course Oracle provides worldwide students a way to share course materials and course ratings. Course rating can be stored on the block chain optionally. User uses cryptocurrencies to purchase course materials, the user who shared the materials earns a portion from the purchase and can withdraw to their own wallet.

This hackthon is a blockchain entrepreneurship camp hosted by the Shanghai Tree Map Blockchain Research Institute and the Conflux Blockchain Foundation. A group of 5 UofT students completed this project.

2020 **Where To Buy Switch**

Scan availability of Nintendo Switch from Amazon.ca, Bestbuy, Staples, The Source, Walmart, EB Games. Receive real-time email update when in stock.

2019 **Excel Formula Parser & Evaluator**

A JavaScript library to parse and evaluate MS Excel/Google Sheets formulas with near 300 formulas support and competitive performance. It can be used to build an alternative to Google Sheets.

Published to NPM with 1.5K weekly downloads.

2019 **Generic Data Collection Tool**

A web app designed for businesses to create data collection forms on the fly and collect data in a short period of time. It provides MS excel like web interface for ease of use.

2019 **Xlsx Populate**

A JavaScript library that creates or modifies MS Excel files. It supports real-time formula evaluating and is able to run in the browser.

2019 **Portfolio**

Portfolio [lesterlyu.github.io](#) hosted on the GitHub pages.

2017 **Connect Four AI**

An implementation of Minimax Algorithm on [Connect Four](#) with GUI.

2016 **UofT Timetable**

A timetable Android app for students in University of Toronto. Students can import their timetable from their student account and search course details.

2016 **Acorn API**

An Acorn API for University of Toronto. Acorn is UofT's student information service. It has no public API. It is implemented to support the UofT Timetable above.

NOTES

- This resume also available on <https://lesterlyu.github.io/resume.pdf>
- There are some demos on the [portfolio](#).
- UofT Timetable is temporary unpublished from Play Store due to an API change from UofT.