

Thiloshon Nagarajah

Graduate Student, USC

Mobile: +1 512 803 3696

Email: thiloshon@gmail.com

GitHub: github.com/thiloshon

Web: thiloshon.wordpress.com

LinkedIn: linkedin.com/in/thiloshon

SKILLS

| Skill | Rating | Experience |
|--|-------------|------------|
| R, Shiny, golem, ggplot, Markdown, Knitr, shinytest, blogdown | ★★★★★★★★★☆☆ | 3+ |
| Java, Maven, Hibernate, OSGi, JSP, Servlets | ★★★★★★★★★☆☆ | 3+ |
| JavaScript, TypeScript, jQuery, React, Redux, Webpack, Jaggery | ★★★★★★★★★☆☆ | 3+ |
| HTML, CSS, Saas, Materialize, Bootstrap, WordPress | ★★★★★★★★★☆☆ | 3+ |
| Oracle, MySQL, MS SQL Server | ★★★★★★★★★☆☆ | 3+ |
| JUnit, TestNG, Selenium, Mockito, PowerMock, JaCoCo, JProfiler | ★★★★★★★★★☆☆ | 3+ |
| Docker, Gradle, Ant, Jenkins, AppVeyor, Travis CI, Binder, OpenStack | ★★★★★★★★★☆☆ | 2+ |
| H2, SQLite, Firebase | ★★★★★★★★★☆☆ | 2+ |
| PHP, CodeIgniter | ★★★★★★★★★☆☆ | 2+ |
| WSO2 APIM, IAM, EI, Siddhi | ★★★★★★★★★☆☆ | 3+ |
| Git, GitHub, Actions, FindBugs, CheckStyle, Lintr, SonarQube | ★★★★★★★★★☆☆ | 3+ |
| REST, SOAP, XML, JAX-RS, CXF, Jersey, YAML, TOML | ★★★★★★★★★☆☆ | 3+ |
| JSON, JWE, JWT, JWS, JWK, MTLS | ★★★★★★★★★☆☆ | 3+ |
| OAuth, OpenID, SSO, FAPI | ★★★★★★★★★☆☆ | 3+ |
| Linux, SSH, Postman, Curl, Swagger, Shell, Arduino | ★★★★★★★★★☆☆ | 3+ |
| IntelliJ IDEA, RStudio, VS Code | ★★★★★★★★★☆☆ | 3+ |
| Agile, Scrum, JIRA, Trello, Confluence, Trello, Notion | ★★★★★★★★★☆☆ | 3+ |

EXPERIENCE

- **WSO2** | Senior Software Engineer (1 month) | June 2021 – Present | Sri Lanka
- **WSO2** | Software Engineer (2 Year) | June 2019 – May 2021 | Sri Lanka
- **Technion - Israel Institute of Technology** | R Developer (1 Year) | Jan 2019 – Dec 2019 | Remote
- **R Organization for Statistical Programming** | Google Summer of Code Student Developer (2017 - 2018)
- **WSO2** | Software Engineer Intern (1 Year) | July 2017 – June 2018 | Sri Lanka

EDUCATION

University of Southern California

Master's in Computer Science (Artificial Intelligence) (2021 - 2023)

University of Westminster, UK

B.Eng. (Hons.) in Software Engineering, Gold Medalist (2015 - 2019)

- **Ranked 1/154**
- University Student Representative and Teaching Assistant

ROLES RELATED TO GRADING

- **Teaching assistant at University of Westminster.** Software Development Principles (ECSI405, ECSI410) & Object-Oriented Programming (5COSC007C)
- **Research assistant at Technion, Israel Institute of Technology.** Authored R Packages: bddwc, bdchecks, bdclean, rsqLiteadmin, bddashboard
- **Mentor at Google Summer of Code** for R Language for Statistical Computing
- **Visiting Lecturer at Informatics Institute of Technology (IIT, Colombo)** for Software Development Group project (5COSC009C) and Project Supervisor for Final Year Project (6COSC012C)

PUBLICATIONS

- **An Extensive Checklist for Building AutoML Systems in R (AutoMLR).**
The 1st Interdisciplinary Workshop on Algorithm Selection and Meta-Learning in Information Retrieval @ European Conference on Information Retrieval (ECIR), Cologne, Germany. 2019
- **A Review on Automated Machine Learning (AutoML) Systems.**
IEEE 5th International Conference for Convergence in Technology (I2CT), Bombay, India. 2019
- **The bdverse: an infrastructural and modular toolkit for biodiversity data quality in R.**
GEO BON Open Science Conference and All Hands Meeting. 2020
- **Introducing 'The bdverse': a family of R packages for biodiversity data.**
Biodiversity Next 2019 Annual Conference, Leiden, The Netherlands. Biodiversity Information Science and Standards
- **Introducing 'The bdverse': an ensemble of R packages for biodiversity big-data.**
ICCS 2019, the 2nd Israeli Conference for Conservation Science, Israel.
- **Introducing bdclean: a user-friendly biodiversity data cleaning pipeline.**
Biodiversity Information Science and Standards. 2018
- **Towards a comprehensive workflow for biodiversity data in R.**
TDWG 2017 Annual Conference, Ottawa, Canada. Proceedings of TDWG

HONOURS

- Dr. Gamini Wickramasinghe **Gold Medal** for Outstanding Achievement by University of Westminster
- Merit Award for Software - Business and Industrial Products Category at **APICTA**, Ha Long, Vietnam
- **Best Final Year Project** by Zone 24x7 (highest graded BSc dissertation in the university history)
- **Gold Winner** at National Best Quality Software Awards by British Computer Society
- **Gold Award** for Best Software Product at Cutting Edge 2019 by Virtusa Inc (for BSc dissertation)
- First Runners Up, Ebbe Nielsen Challenge by Global Biodiversity Information Facility (**4000\$ award**)
- **1st runners up** at IIT Hack 2017 the biggest intra university 24-hour hackathon
- Ranked **first** in university at IEEE Xplore 10.0 2016

CERTIFICATIONS

Neural Networks and Deep Learning

- **DeepLearning.AI** | Coursera Certifications | 2021

Stanford University

- **Machine Learning** | Coursera Certifications | 2018

Johns Hopkins University

- **Data Science Specialization** (10 courses) | Coursera Certifications | 2017

University of California, San Diego

- **Data Structures and Algorithms** (3 courses) | Coursera Certifications | 2016

Hebrew University of Jerusalem

- **Build a Modern Computer from First Principles: From NAND to Tetris** | Coursera Certifications | 2016

LEADERSHIP & VOLUNTEERING

- Mentor and Student for R Organization for Statistical Programming at **Google Summer of Code**
- Open-source contributor for bdverse, Sahana Software Foundation and **Fedora** Project
- Teaching assistant and **guest lecturer** at IIT, Colombo on machine learning and AI concepts
- Secretary of WSO2 **Toastmasters Club** and Member of **IEEE** Student Branch
- Organizer at **TEDxColombo** 2018

PROJECTS

Biodiversity Big Data Cleaning

Role: R Developer (1 year)

- Provided biodiversity software solutions and consultation for Carmel's Ecology Lab in Technion.
- Responsible for R development, package maintenance, defensive coding, quality assurance, GUI development and documentation.
- Authored 5 research papers and 3 CRAN Packages.

Environment: **R, Shiny, ggplot, Markdown, Knitr, SQLite**

AutoMLR

Role: R Developer (1 year)

- Analyzed 9 million datapoints of past machine learning experiments to build an autonomous machine learning system (AutoML) for regression and classification learning.
- Automated manual processes of machine learning like algorithms selection, preprocessing, training, parameter tuning and model evaluation.

Environment: **R, Shiny, Markdown, Shiny, JavaScript, REST**

Cache management for high performance request handling

Role: Java Developer (3 Months)

- Wrote high performance code in Java to facilitate regulatory compliant financial APIs.
- Improved performance by integrating primary-secondary caching system and HTTP connection pools.
- Used profilers to find bottlenecks and improved the solution.

Environment: **Hibernate, Java, JProfiler**

Financial Services Aggregating Web Service

Role: Java Developer (3 Months)

- Designed and developed financial RESTful Web Services for bank account and payment aggregation.
- Used available Open Banking sandboxes of the banks to design general aggregation layer.

Environment: **Java, Jersey, REST, JSON, MySQL, JUnit**

Building AISP & Fraud Detection Web Applications

Role: Web Developer (3 Months)

- Developed React applications that consume APIs and services for financial services and fraud detection.
- Used redux to maintain state of complex applications.
- Used webpack to generate static website deployable in Tomcat.

Environment: **React, Redux, Siddhi, Jaggery, Webpack, JavaScript, Saas, Materialize, Lint**

Dockerization of the API Manager

Role: DevOps Engineer (3 Months)

- Deployed API systems to cloud with Docker and debugging through SSH.
- Managed deployment pipelines with GitHub Actions and Travis to automate CI/CD.
- Created Binder instances directly from GitHub source code for manual testing.

Environment: **Docker, GitHub Actions, Travis CI, Binder, SSH, YAML**

Driving Unit Testing Effort

Role: Quality Assurance Manager (3 Months)

- Followed TDD Using TestNG and Mockito and developed automated integration test suites.
- Improved and educated about team's unit test coverages and method complexities.

Environment: **JUnit, TestNG, Mockito, PowerMock, JaCoCo, GitHub, GitHub Actions**