

Rahul D. Ghosal

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EXPERIENCE

Ultimate Technologies Inc. (Nagano, Japan)

Apr 2019 – Dec 2019

Application Developer (Full-time)

- Designed, developed, tested, and distributed CLI tools in **Python 3**, which implement **MS Office APIs** for robotic process automation (**RPA**) in company's **printed circuit board design and simulation** services.
- Developed plugins in **JavaScript ES6** that integrate **REST API** provided by Kintone (**cloud**-based SaaS) and style outputs using **Bootstrap** and custom **CSS**.
- Administrated company's Kintone domain, on-premise **FTP servers**, and **Docker** daemon.
- Proposed solutions based on **open-source software** and third-party APIs, saving approximately \$1000.
- Founded and led automation engineering team, while mentoring members on Python 3.

PROJECTS

Single-Page Web Application for Improving Typing Speed and Accuracy

Jan 2019 – Present

Implements an **edit distance** algorithm to score timed typing sessions where users can select up to 154 different model texts to shadow. Scores are stored in a **relational database** and visualized using **D3.js** for the user to track their progress.

Frameworks: ASP.NET, MSSQL, React, D3 | Repo: <https://github.com/rdghosal/TypeOnWillie>

Search Bar Plugin for Approximate String Matching

Dec 2019

Appends search bar components to **DOM** and **asynchronously** retrieves all database records before filtering them by specified field using JavaScript string methods. Output renders in separate browser tab and is styled with Bootstrap.

Framework: Bootstrap | Repo: <https://github.com/rdghosal/kintoneScripts>

CLI Web Scraper with Language Detection and Spellcheck

Nov 2019

Implements queue to **scrape text** from an input URL and all internal links therein. Interfaces Google Translate and open-source APIs to detect language and spellcheck if English. **Cleansed data** is saved locally as text or CSV file.

Frameworks: Selenium, Pytest | Repo: <https://github.com/rdghosal/Honyaku.py>

SKILLS

Libraries / Frameworks: ASP.NET, Flask, React, Bootstrap, Selenium, Pytest

Programming: C#, Python, JavaScript, TypeScript, SQL, CSS, HTML

Tools: Docker, Heroku, Postman, MSSQL, PostgreSQL, Git, ArcGIS, MS Office Suite

Languages: English (native), Japanese (fluent), Chinese (conversational), Spanish (conversational), Bengali (conversational)

EDUCATION

Masters in Global Environmental Studies, Kyoto University

Apr 2017 – Mar 2019

Concentration: Ecological Economics | GPA: 3.861

Bachelor of Environmental Science, Rutgers University

Sept 2011 – May 2015

Minors: Japanese, Philosophy | GPA: 3.813, *Magna cum laude*

COURSEWORK & CERTIFICATIONS

Algorithmic Design and Techniques, UC San Diego via edX

Ongoing

CS50's Introduction to Computer Science, Harvard University via edX

Apr 2019 – Nov 2019