

# Rahul D. Ghosal

(732) 402-7420 | [rdghosal@gmail.com](mailto:rdghosal@gmail.com) | <https://rdghosal.github.io/portfolio> | <https://github.com/rdghosal>

## EXPERIENCE

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### 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 PaaS) and style outputs using Bootstrap and custom CSS.
- Administered 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

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### Single-Page Web Application for Audio Visualization and Recording

Ongoing

Integrates open-source module to visualize audio recordings of user as well as of English words fetched from third-party database. Compares these recordings with audio fingerprinting and saves session data to PostgreSQL database.

Languages: Python, JavaScript, SQL | Frameworks: Flask, React, Enzyme | Repo: <https://github.com/rdghosal/WaveNative>

### 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.

Languages: JavaScript, CSS | 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 API to detect language and spellcheck if English. Text data is cleansed and saved locally as text or CSV file.

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

## SKILLS

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**Libraries / Frameworks:** Flask, React, Bootstrap, Selenium, Pytest

**Programming:** Python, JavaScript, SQL, CSS, HTML

**Tools:** Git, PostgreSQL, Docker, ArcGIS, MS Office Suite

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

## EDUCATION

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### 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

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**Algorithmic Design and Techniques**, UC San Diego via edX

Ongoing

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

Apr 2019 – Nov 2019