

Oitihya Sen

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PERSONAL PROJECTS

Twirl URL Shortener

Code: <https://github.com/oitee/twirl>

Deployed: <https://oteetwirl.herokuapp.com/signup>

- **Web app** to shorten URLs on a per-user basis, with basic analytics tracking
- Password storage with **salted HMAC**, using standard **pbkdf2** function
- **Authentication middleware** to enforce redirection to log-in page without encrypted session cookies
- Enforce HTTPS on Heroku by reading the X-Forwarded-Proto HTTP header
- **Google's recaptcha v2**, to prevent bots from sign-up
- **Unique short links generated** by using counters on PostgreSQL and a **pseudo-random string**
- **User interaction flow** integration testing. Deployed on GitHub workflow
- *Back-end built using:* NodeJs, **Express framework**, Mustache templates, **PostgreSQL**, deployed on **Heroku**
- *Front-end built using:* **JavaScript**, Bootstrap CSS, HTML

Cardimom Blog Post Twitter Bot

Code: <https://github.com/oitee/cardimom>

Post: <https://otee.dev/2021/10/10/cardimom-twitter-bot.html>

- A bot to **consume** XML feed from selected blogs, **tweet filtered posts**
- Deployed here: <https://twitter.com/cardimomT>; published 122 tweets
- **System configuration file** for adding new blogs and filters
- **RSS** and **Atom** parsing, using JSDOM
- **Idempotency** guarantees and **at-most once semantics**
- **Secrets** managed via environment variables; not on source code
- **Integration tests** using Jest framework on GitHub workflow using **Docker** for **PostgreSQL**
- *Built using:* NodeJs, PostgreSQL, Twitter REST API, deployed on Heroku

Crisp LISP interpreter

Code: <https://github.com/oitee/crisp>

Post: <https://otee.dev/2021/08/24/crisp-a-simple-lisp-interpreter.html>

- Evaluate S-expressions in **LISP** languages like Clojure using **LR-parsing**
- Using **stack** for **nested** expression evaluation
- CLI interpreter for reading, evaluating and printing on loop (**REPL**)
- Compiled browser version for REPL using Babel
- **Unit testing using Jest** framework on GitHub workflow
- *Built using:* NodeJs

Tech Blog

Code: <https://github.com/oitee/oitee.github.io>

Deployed: <https://otee.dev/>

- **Self-documentation** of technical concepts
- Built using **Jekyll** static site generator, hosted on **Github Pages**, served on **Google domains** and tracked using Google Analytics
- **600+** page views in the last 90 days, with **200+ unique users**

A qualified lawyer,
switching to a career in
back-end engineering

EDUCATION

B.A., LL.B(Hons.)

Hidayatullah National Law University

CGPA: 8.00/10; Rank: **10 out of 180**

WORK EXPERIENCE

Research Fellow

Vidhi Centre for Legal Policy (2019-21)

- Resident **subject-matter expert** on India's Insolvency and Bankruptcy Code, 2016.
- Advised the Ministry of Corporate Affairs on legislative amendments
- Contributed to various Government Reports on insolvency reforms
- **Co-authored:** 'Designing a Framework for Pre-Packaged Insolvency Resolution in India Some Ideas for Reform' (February, 2020)

Legal Manager(Corporate)

ICICI Bank (2018-19)

- Drafted multi-party loan agreements
- Prepared written statements and represented the Bank before Civil and Consumer Courts
- Researched on banking and insolvency legislations

SKILLS

NodeJs **Express** **PostgreSQL**

Heroku **APIs** **VS Code**

LINKS

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 twitter.com/oteecodes

 linkedin.com/in/oitihya

 leetcode.com/oitee