

Liang Guo Espland, PhD

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Motivated software engineer with experience in programming, software design and development, web application, APIs, and databases. A problem-solver with growth mindset. Great organizing and time management skills. Excellent written and verbal communication skills.

Skills

Programming: Python, Java, Javascript, HTML, CSS, SQL, R

Tools: Django, Flask, Node.js, Git, Docker, Postman, JQuery, Heroku, bash, JSON, cloud service (e.g. AWS)

Databases: Relational databases (e.g. SQLite, PostgreSQL), nonSQL databases (e.g. MongoDB)

Projects

A Personal Portfolio website (<https://happycoding47.pythonanywhere.com/>)

- Built a responsive portfolio website with Python, HTML5, CSS3, Bootstrap 4 and Django
- Published the website on PythonAnywhere

A To-do List Manager web application (<https://espland-to-do-list.herokuapp.com/>)

- Used Django to create a website where a user can sign up for an account and fully manage a to-do list.
- Established an user authentication system (sign up, login, logout)
- Created a CRUD application (Create, Read, Update, Delete)
- Tested the application with Pytest before deployed to Heroku

A resource-based, production-ready REST API (<https://rest-apis-flask.onrender.com/swagger-ui>)

- Created a REST API that includes authentication, deployments, and databases with Python, Flask and SQL
- Containerized the application using Docker
- Used SQLAlchemy to store resources to a SQLite database or a PostgreSQL database (for production)
- Hosted the API to Render and tested with Postman (endpoint: <https://rest-apis-flask.onrender.com>)

Education and Scholarships

University of Washington, Seattle, WA - **Software Development & Design Essentials Certificate Program** 2021

- My Career Advancement Account Scholarship, Department of Defense, US gov
- Operation Jump Start Scholarship, Monterey Bay Military Spouse Club

University of Minnesota, Minneapolis, MN - **Ph. D.** in Molecular Biology (**GPA 3.8/4.0**) 2012 – 2018

- Institute for Molecular Virology Fellowship, National Institute of Health, three consecutive years

China Agricultural University, Beijing, China - **B.S. (GPA 3.8/4.0)** 2006 - 2011

- National Scholarship (Top 1%), China gov, three consecutive years

Professional and Community Experience

Self-learning programming enthusiast 2019 - present

- Obtained certificates for online courses, such as The Structure and Interpretation of Computer Programs, Full Stack Websites with Python Web Development, The complete Node.js Developer Course, Advanced Python Programming: build 10 Object Oriented Programming (OOP) Applications, etc.
- Oracle Certified Associate, Java SE8 Programmer
- Contribute to Open Source Communities such as Github and Gitlab, e.g. participated in Hacktoberfest 2022

Member of MilSpouse Coders. 2020 - present

- Design and develop projects individually and as a team member; Debugging and testing; Provide code reviews

The Economic Development Fellows Consulting Program, University of Minnesota 2018

- Used Python and Selenium to scrape and process information from websites that contain labor statistics

Employment History

Patient Care Technician - Avera McKennan Hospital, Sioux Falls, SD 2019 - 2020

- Demonstrated time management and organizing skills in a fast-paced workplace; Worked independently as well as collaboratively within cross-functional teams; Mentored junior trainees; Communicated effectively with customers and increased their satisfaction

Research Assistant - University of Minnesota, Minneapolis, MN 2012 - 2018

- Developed an application using Python and R to help analyze high throughput genetic sequencing data generated from biomedical experiments, which led to a publication in a top journal ([Nucleic Acids Research](#), Impact Factor 19.16)