

Hao Wu

Senior Software Engineer

Location: Remote (Portland, OR)

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Work Authorization: U.S.Citizen

Senior Software Engineer focuses on the backend.
Built and deployed web services and applications since 2011.
Details of my past projects can be found at <https://github.com/haowu0802/About/wiki>

Skillset	more experienced	less experienced
Backend	Python NodeJS	Golang PHP
DevOps	GCP(GKE), AWS, Kubernetes	Alicloud, Heroku, Docker
Database	PostgreSQL MongoDB MySQL	
DataEngineering	Apache-Airflow Pandas NumPy	Matplotlib Scikit-learn
Frontend	Javascript	HTML/CSS
Frameworks	Django Flask	JQuery
Methodologies	RESTful GraphQL Agile/Scrum	Test-Driven-Development

PROFESSIONAL EXPERIENCE

Archimedes Digital / Alexandria Foundation - Remote

Director of Web Services (FTE)

February 2018 - August 2021

+ Backend:

Django: develop fully featured CMS sites with RESTful endpoints and scripts for ETL.

NodeJS: develop **GraphQL** web services for querying text and perform CRUD to a CMS.

Flask: develop a lightweight micro-service for retrieving/parsing Google Vision AI results.

Golang: develop a lightweight micro-service for parsing text.

+ DevOps:

Build and deploy **Kubernetes** clusters on **Google Kubernetes Engine** with ~50 auto scalable deployments that run ~20 web services/apps.

Build CI/CD pipeline to automate code deployment from Gitlab to **Google Kubernetes Engine**.

Setup load balancers on **Google Cloud Platform** and on **AWS S3/Cloudfront**.

+ Frontend: troubleshoot and fix data issues in **React** components/containers.

+ Test: add **unit/e2e tests** to NodeJS apps and integrate the tests with CI/CD.

+ Management: work with clients to extract requirements and design features, estimate costs, define milestones and specify expected results of iteration cycles.

Huawei Technology - Seattle Computing Lab

Senior Software Engineer (Contract)

September 2017 - February 2018

+ Decouple, redesign, refactor legacy system into **Flask** microservices that are easier to maintain.

+ Replace SOAP APIs with RESTful and optimize by exposing some models with **GraphQL**.

+ Build tools for testing vulnerabilities of systems with **Python**.

+ **Dockerize** components with Alpine based minimal images.

Branded Entertainment Network (Corbis) - Seattle

Data Engineer (Contract)

September 2016 - January 2017

The data science team creates data pipelines between applications and does data mining.

- + ETL: Extract and transform TV show airing data from multiple data warehouses and load into **MongoDB** and **PostgreSQL** for further analysis.
- + **Apache-Airflow** Data Pipeline: Write Directed Acyclic Graphs, Pipeline the ETL processes, visualize the status of each process and provide features such as ad hoc task runs of scheduled directed acyclic graph instances. Write Docker-py plug-in and non-backfilling feature.
- + Data Analysis: With **Python** data science libraries such as NumPy, Pandas, Scikit-learn, run models such as linear regression, random forest, etc. to predict the brand preference of the audience.
- + Data Visualization: With C3js, plot interactive charts and tables for the data and use Matplotlib to plot the clusters of behavior/preferences extracted from audience data.

Zanadu Travel - Beijing

Software Engineer (FTE)

February 2014 - February 2016

- + Develop web scrapers with **Python**(Scrappy/BeautifulSoup) to scrape price data from competitors through anti-scraping means.
- + Develop scripts to auto-adjust hotel booking prices according to data scraped from competitors.
- + Integrate 3rd party commenting system (BazaarVoice) to the hotel/trip booking site with **PHP**(Yii framework).

Dangdang E-commerce - Beijing

Backend Developer (FTE)

December 2011 - February 2014

- + Develop RESTful API with **PHP** for mobile apps of the e-commerce site.
- + Coordinate server-side code deployment to production with devOps/DBAs.
- + Develop dashboard and scripts for gathering user footprint data.

EDUCATION

University of Pittsburgh, Pittsburgh, PA Bachelor of Science Degree Computer Science Major	Graduated in 2010 with GPA 3.57/4.00 Specialty: Software Engineering Game Development
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RECOMMENDATION

Nicholas Johnson - Data Science Lead Developer - Corbis (Branded Entertainment Network)

"I worked directly with Hao at the BEN Group data development/science team. While on our team Hao headed up the development of a critical ETL management system and deployed it to production, worked on data exploration and regression analysis projects, and also pushed our team to have improved development practices. Hao is a sharp, self-directed engineer that produces high quality, easy to understand software. He is also very business-oriented; he focuses on understanding the customer and delivering features that benefit the customer and ultimately the business."

December 28, 2016, Nicholas managed Hao directly
Posted on <https://www.linkedin.com/in/haowu0802/>