Michael Hsu

sleepokay@gmail.com • 202-468-6030

Github: @sleepokay
Personal: everythingisreally.com

SKILLS

FLUENT

Python, JavaScript, Java, HTML/CSS, SQL

Django, Bootstrap, JQuery, PostgreSQL, ArcGIS, Photoshop

FAMILIAR

PHP, C, C++, Standard ML

React, Node.js, AWS, nginx

RECENT EXPERIENCES

SHOPTHAT | SOFTWARE ENGINEER

September 2017 – March 2018 • New York, NY

- Fullstack development of e-commerce and B2B data analytics platform with Django backend and React and Bootstrap frontends. Service was run on multiple Docker containers and backed by a PostgreSQL database.
- Extensive integration work with Facebook, YouTube, and Instagram APIs. Built a data pipeline to ingest and process roughly half a million Youtube and Instagram social media posts and videos per day. Implemented a sharing feature for a Facebook Messenger chatbot that saw 7% increase in product page visits.
- Implemented fuzzy string matching in conjunction with n-grams algorithm to link social media content to tens of thousands of product SKUs, as well as a recommendation system for products using said relations table.
- URL routing, encoding, and parsing with Django and nginx.
- Paired on configuring and maintaining services such as Kubernetes, Oauth2, Celery task manager, and Jenkins for continuous integration.

RECURSE CENTER | INDEPENDENT STUDY

May 2017 – August 2017 • New York, NY

- Researched lichen biology and created original cellar automata simulations using the Processing framework.
- Implemented grid-based visualization of Thomas Schelling's model of racial dynamics in Javascript.
- Using OpenCV and dlib, made facial alignment and averaging script for profile photos of Recurse Center participants.
- Created visualization of fractal forms of plants (L-systems) in Javascript and p5 framework.

NEW ENGLAND COMPLEX SYSTEMS INSTITUTE | COMPLEX SYSTEMS THEORY AND MODELLING

August 2016 • Cambridge, MA

- Intensive multi-disciplinary science and modelling course hosted at MIT. Studied topics such as cellular automata, emergent behaviors, network effects, biological systems, and geosocial systems. Studied and modelled network effects using Python, e.g. Twitter social graph analysis and Watts Strogatz models of "small world" networks.

TAIWAN NATIONAL SERVICE | HUALIEN CULTURAL CENTER

October 2014 – June 2016 • Hualien, Taiwan

- Data engineer for audience questionnaires. Using Ploty API, generated graphs and reports of audience demographics and opinions for hundreds of events and shows. Also redesigned questionnaire to be more amenable to automatic processing.

MCGILL GEOGRAPHIC INFORMATION CENTER | CARTOGRAPHY RESEARCHER

September 2013 – October 2014 • Montreal, QC

- Developed Java application for field data ETL and analysis for the Peruvian Amazon Rural Livelihoods and Poverty (PARLAP) Project. Made maps of river communities showing the interrelatedness of their economies and activities, forming the basis for cost-path analyses of their economic networks.
- Made comprehensive maps of all of North American coastal wetlands for the Blue Carbon Mapping Project with ArcGIS.

DECODE GLOBAL | DESIGN & PROGRAMMING INTERN

May 2013 – August 2013 • Montreal, QC

- Designed and built company website with WordPress and PHP.
- Helped prototype image gamma correction module in Javascript for open source water testing project mWater.

EDUCATION

MCGILL UNIVERSITY | B.A. COMPUTER SCIENCE

2009 - 2014 • Montreal, QC

- Areas of focus: algorithms, discrete math, complexity theory.
- Graduate level bioinformatics research on phylogenetic algorithms + RNA folding structures.
- Minors in English Lit. and Mathematics.