KAI SEWARD

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SKILLS

React / Redux, JavaScript, Python, PHP, SQL, HTML / CSS

EXPERIENCE

Search Ranking Specialist / Tool Specialist | *Facebook* | 2014 -2020

- Built and maintained tools in PHP (Hack / HHVM), JavaScript, and ReactJS used by a large contingent workforce (in-house and crowdsourced) to provide millions of points of human-judged relevance and classification data daily to Facebook's product teams including those focused on search ranking, news, places, videos, trending topics, NLP, and others.
- Designed and built internal tools with PHP and SQL and developed metrics based on academic research for internal teams and contracted vendors to track quality in human judgment data including visualizers for ground truth agreement, inter- and intra-rater reliability (kappa scores), confusion matrices, precision / recall, and disagreements.
- Collaborated with a team of software engineers as a member of an on-call rotation serving as the primary point of contact and owner for fixing bugs in the platforms, tools, and code for our team; went on to win a "fix of the month award" for quickly spinning up a framework to prevent user privacy policy violations in our human rating platform.
- Designed and implemented a logging and reporting system based on an internal logging API, a Python and Apache Hive-based ETL pipeline, and a PHP-based vendor-facing tool to automate time-tracking and billing for contingent workers saving millions of dollars in lost productivity arising from inaccurate/exaggerated time reports and slow task processing.
- Managed and developed training programs for a team of 40+ onsite contingent workers, overseeing relationships with vendors acting as an advocate for their needs on the engineering team as our rating workforce scaled from around 30 onsite workers to 2000+ human raters globally.
- Contributed to a winning project at Facebook's 42nd Hackathon which was presented to Facebook leadership, eventually going on to become a real user-facing feature of Facebook and Facebook Messenger products: *Sticker Search*.

PROJECTS

kaiNaturalist (ReactJS / Redux, Python / Flask)   live | github

A social citizen science / exploration app based on iNaturalist.org that allows users to upload and geotag their observations of the natural world and collaborate with the community to identify plants, animals, and fungi.

- Designed complex custom map-based features using the open source Leaflet JS library allowing users to populate location-based forms with an intuitive, draggable UI and explore uploaded data on a dynamic map.
- Leveraged external taxonomy APIs to design and seed a biological database in Flask SQLAlchemy used to populate a traversable Redux-based taxonomy store allowing users to tag observations with structured taxonomic information and handle consensus logic on multiple taxonomic levels.
- Utilized AWS S3 for user uploads allowing for photo-based features that scale far beyond the limits of a Heroku deployment.

DebonairBnB (ReactJS / Redux, Python / Flask)   live | github

A spiritual clone of AirBnB for only the finest, most luxurious stays in the world.

- Leveraged the geopy Python package with the Google Maps API to build an object-oriented geocoding / reverse geocoding utility allowing collaborators to iterate on location-aware objects quickly and ensure properly structured data without requiring complicated validations of user input.
- Developed a custom reusable emoji-based "star" rating component using React, CSS3, and React Hooks providing a unique rating-review flow adhering to our visual theme.
- Built out the majority of the project's Flask / SQLAlchemy backend, API Routes, and Redux store during the initial stages of our project so that collaborators could iterate quickly on features.

EDUCATION

App Academy | *Full-Stack Software Engineering (January 2022)*

Virginia Tech | *Bachelor of Science in Mathematics, Minors in Biology & Entomology*

   Relevant Coursework: *Python Programming, Number Theory, Discrete Mathematics, Combinatorics*