PATRICK BENDER

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EDUCATION

B.A. Math, B.A. Chemistry, Occidental College   May 2020

GPA: 3.73, Cum Laude, Dean's List (2016-2020), Distinction in Math

Coursework: Data Structures & Algorithms, Graph Theory, Numerical Analysis, Real Analysis (I-III), Differential Equations, Complex Analysis, Physical Chemistry, Inorganic Chemistry

Senior Thesis on Machine Learning Applications to Chemistry

SKILLS

Languages/Frameworks	Python, Scala, Clojure, JavaScript, Flask, React
Technical Skills	MongoDB, Linux, Apache, AWS

PROJECTS & STARTUPS

curbongroceries.myshopify.com   Jan 2021 - Present

- Built an online grocery store with over $1,000 in revenue and a 10% margin
- Scraped a local grocery store's website using scrapy and used Shopify's API to automatically add and maintain over 4,000 products
- Shopped 7 times for 5 customers, 3 of whom I manually recruited on NextDoor
- Conducted 6 customer interviews using principles from The Mom Test by Rob Fitzpatrick

wholesearchcatalog.com   July 2020 - August 2020

- Built a search engine for hand-picked technical blogs, software documentation, and wikis
- Implemented in Python using MongoDB, Scrapy, Flask, and a custom ETL pipeline
- Used a modified version of the Okapi BM25 algorithm to evaluate search results, which weighted terms by HTML tag rather than just raw word count
- Crawled over 150 sites and has indexed over 50,000 pages with an average search time of less than 3 seconds on a single t2.medium AWS instance
- Implemented lazy evaluation and memoization of the page evaluation function to reduce search time by 90% for previously evaluated urls

EXPERIENCE

Research Assistant   Fall 2017 - Spring 2018
Udit Chemistry Lab

- Faculty-advised research on the Cytochrome P450 protein, which functionalizes hydrocarbons with an oxygen via a heme center

Residential Advisor   Fall 2017 - Spring 2019
Occidental College

- Acted as a resource and source of support for 337 residents
- 24 hour duty rotation and first responder in crisis situations
- Planned and facilitated 16 events per year to help build community in dorms