

Michael Arnold - Software Engineer

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EDUCATION

California State Polytechnic University, Pomona

Bachelor of Science, Chemical Engineering

Honors: Cum Laude

Graduation: May 2021

GPA: 3.50/4.00

EXPERIENCE

Engineering Intern - Elsinore Valley Municipal Water District

July 2020 - July 2021

- Developed a python application to predict demands for recycled water which reduced the need for supplementary potable water by 30% during peak season.
- Led a project to automate the analysis and visualization of water quality data as part of a collaborative lake health maintenance program, saving 30 man-hours per week.
- Built an internal software tool to screen and analyze groundwater field data that improved overall efficiency and extended groundwater blending programs to 4 additional sites.
- Automated reporting with a program that filled and submitted web-forms with data from existing excel spreadsheets by using python requests and BeautifulSoup libraries, saving 100 man-hours per month.

Maintainer - Zettelkasten (<https://gitlab.com/michaelarnold/bash-scripts-linux>)

August 2021 - Current

- Developed a CLI software that serves as a knowledge management tool and note organizing system using shell scripting and Linux.
- Implemented a social feature that utilizes python scripting Twitter's API to share content as it is created through the Zettelkasten CLI.
- Working to refactor the codebase according to POSIX compliant standards in order to support users working with various shell environments.

Developer - WorkTrax (<http://crudemployeemanagement.herokuapp.com/>)

July 2021 - August 2021

- Created a CRUD employee management application using PHP Laravel, MySQL, Bootstrap, and Vue.js with MVC design pattern.
- Implemented user registration/authentication and built a backend for "User Management" and "System Management" features.
- Utilized Vue.js for the "Employee Management" feature's frontend and built API endpoints for categorizing and filtering employees.

SKILLS & INTERESTS

- **Programming Languages:** HTML/CSS, JavaScript, Python, PHP, Shell
- **Frameworks & Libraries:** Pandas, Numpy, React, Laravel, Bootstrap
- **Development Tools:** UNIX/Linux, Git, Vim
- **Interests:** Backend Development, Frontend Development, Cloud-Native Architecture

PUBLICATIONS

Author: Arnold, M., Boghosian, B., & Li, M. (2021). Catalytic Production of Diesel-Like Oils From Plastic Wastes. *Journal of Renewable and Sustainable Energy*, 13(6), 064701.

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