DEREK EKLUND

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OBJECTIVE

To secure a challenging role in a programming-centric environment, leveraging my background in biotechnology and expertise in Python programming to contribute effectively to projects and optimize processes.

EXPERIENCE

Program Developer | Thermo Fisher Scientific   **2017 - 2024**

- Created Python application to parse, organize, and analyze liquid handling instrument log files to produce Matplotlib and Seaborn visualizations of assay plate volumes and errors produced by the instrument, allowing instrument operators and other program developers to quickly identify instrument errors or program bugs and inefficiencies, greatly improving workflow. Utilized Pandas and NumPy libraries to help eliminate human review errors and save co-workers over 10 hours per week. Trained other program developers and principal investigators on application use and Python.
- Developed and integrated Python application that produced Excel and Matplotlib heatmaps from final assay cell counts, allowing principal investigators to quickly analyze assay data and present results to clients, saving principal investigators over 5 hours per week.
- Created Python application that helped collect all labware, liquid classes, and libraries utilized in liquid handling instruments. Application was used to parse hundreds of thousands of log files that had accumulated over ten years, allowing team to identify discrepancies between labware, liquid classes, and libraries across instruments and allowing team to harmonize all items across department and prevent future audit findings.
- Wrote Hamilton, BlueCat, and Momentum Scheduling Software programs that helped fully automate assays that were previously completed by hand, effectively increasing weekly throughput by over 500%. Integrated SQL queries to read and write to/from databases. Wrote, performed, and reviewed test cases to ensure program validity and accuracy. Trained new SMEs and operators on programming, error-handling, maintenance, and day-to-day operation of the instruments and software.

Laboratory Technician | Abbot Technologies   **2016 - 2017**

- Operated and provided maintenance for Tecan EVO machines used to conduct large batches of enzyme-linked immunosorbent assay (ELISA) testing on oral fluid.

SKILLS

Technical Skills
- Python, Django, Flask, Pandas, NumPy, Matplotlib, Seaborn, BeautifulSoup, Selenium
- MySQL, SQLite, HTML, CSS, Excel VBA/Macros
- Hamilton Automated Liquid Handling Software, Momentum Workflow Scheduler Software

Soft Skills
- Effective communication: Provided training to team members and communicated complex technical concepts effectively.
- Problem-solving: Developed solutions to improve workflow efficiency and identify instrument errors.
- Teamwork: Collaborated with colleagues to implement automation solutions and improve processes.
- Time management: Successfully managed multiple projects simultaneously, meeting deadlines and delivering high-quality results.

ACTIVITIES

- Developed full-stack web applications showcasing proficiency in Python, Flask, and Django frameworks.
- Created finance application for S&P 500 company data analysis, demonstrating expertise in data processing and financial analysis.

EDUCATION

Bachelor of Science | Virginia Tech   **2010 - 2014**

- 3.78 GPA