SARTOGRAPHY

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Elizabeth Esswein

SENIOR PYTHON ENGINEER

Seasoned Python Engineer showcasing over ten years of developing, implementing, and optimizing scalable web applications and backend systems. Proficient in advanced Python frameworks such as Django, Flask, and FastAPI, along with a strong foundation in data structures, algorithms, and software design principles. Passionate about collaborating with cross-functional teams to deliver high-quality, innovative solutions within agile environments. Dedicated to leveraging cutting-edge technologies to solve real-world challenges.

CAREER HIGHLIGHTS

- **Technical Leadership of Open Source Project**: maintain the open source SpiffWorkflow library providing all architectural design decisions and making most of the code changes to the leading business process execution engine for Python, increasing its adoption by 170%.
- **Automated Financial Sync**: Integrated Plaid with QuickBooks, streamlining accounting services by automating financial data synchronization.
- **Enhanced Data Exchange**: Integrated APIs for Gmail, Google Sheets, YouTube, and custom applications, boosting operational efficiency through enhanced data exchange and automation.
- **Redesigned Python SDK**: Overhauled and extended the Python SDK,ensuring that the full range of API capabilities was available to machine learning engineers.
- **Automated Content Migration**: Developed automation scripts for migrating client content from legacy systems to an online learning platform while ensuring a smooth transition.

SKILLS & EXPERTISE

Python Programming | Django | Flask | RESTful APIs | SQL | NoSQL | Docker | Kubernetes | CI/CD | AWS | Azure | GCP | Microservices | Unit Testing | TDD | BDD | Agile Methodologies | Git | Data Analysis | Machine Learning | AI | DevOps | Cloud Computing | Scalability | Code Optimization | API Development | CI/CD | System Architecture

PROFESSIONAL EXPERIENCE

Sartography | Staunton, Va **2021 – Present**
Senior Python Developer

- Led the development of new features for the SpiffWorkflow library, including advanced business modeling capabilities and support for complex workflows that increased library adoption 170% (from 900 to 1600 GitHub Stars) among open source users.
- Reduced by half, the average execution time of workflow processes by implementing performance optimizations to improve the efficiency and responsiveness of business modeling operations.
- Led the release of 3 major updates and 14 minor versions of the SpiffWorkflow library over a period of three years.
- Contributed to the SpiffWorkflow community by providing documentation to resolve over 50 open issues and incorporate user feedback that improved overall user satisfaction and community engagement.
- Improved interoperability with other popular business applications and tools by developing and integrating new plugins and extensions for SpiffWorkflow to broaden the library's usability and appeal.
- Minimized technical debt and improved code maintainability by refactoring and modernizing the existing codebase to adhere to best practices in Python development.
- Facilitated training sessions and tutorials for 100s of new developers and contributors to the SpiffWorkflow project, focusing on fostering a collaborative development environment.

Freelance | Washington, DC **2013 – Present**
Programmer

- Optimized data processing and integration for improved spatial analysis by designing and implementing efficient data pipelines for GIS data.
- Enhanced data accuracy and actionable marketing strategies by creating a bespoke application to synchronize and match sales and lead data with Google Analytics insights.
- Improved content curation and real-time information retrieval by developing an application for collecting, classifying, and aggregating content from news sites and social media platforms.
- Automated financial data synchronization by integrating Plaid with QuickBooks for a streamlined accounting

service.

DAS42/Elasticiti | New York, NY **2021 – 2022**
Data Engineer

- Optimized schema design and data loads across Snowflake, Redshift, and BigQuery platforms to enhance data storage efficiency and query performance.
- Improved workflow efficiency and reduced data processing time by automating data pipeline orchestration using Apache Airflow.
- Integrated APIs for Gmail, Google Sheets, YouTube, AWS services, and custom applications to enhance data exchange and automation and increase operational efficiency.
- Designed and enhanced file-based data extraction processes for Excel, CSV, and JSON formats to ensure accurate and timely data ingestion and reduce manual data handling.

Arthur | Washington, DC **2020**
Software Developer

- Redesigned and extended the Python SDK.
- Enhanced SDK functionality and scalability, improving the capacity to handle large datasets and complex models.
- Enabled data scientists to proactively address model performance issues by designing and integrating real-time monitoring and alerting functionalities into the Python SDK.

Learning Objects | Washington, DC **2013 – 2019**
Software Engineer: 2015 – 2019

- Automated the migration of client content from legacy systems into the online learning platform.
- Designed and implemented reporting features in Scala to analyze content types and usage patterns.
- Improved user experience and content creation efficiency by implementing advanced content authoring features within the online learning platform.
- Identified bottlenecks and improved platform reliability by developing and integrating a load testing framework using Gatling to assess system performance under varying conditions.
- Spearheaded data transformation and integration by leveraging Python to manage ETL processes reduce time and effort during course creation in the online learning platform.

Data Wrangler: 2013 – 2014

- Enhanced content creation efficiency by developing an automated system to generate multiple-choice questions on medical terminology, leveraging definitions, word composition, and categorization.
- Analyzed student responses to refine evaluation strategies, improve question selection, and tailor activities to individual performance and goals.
- Increased the accuracy of algorithmic predictions related to student performance using the insights gained from the long-term behavior simulator.
- Identified performance issues and improved system stability by implementing load-testing protocols to ensure the online learning platform scaled effectively for large courses.

ADDITIONAL EXPERIENCE

Bioinformatics Programmer at Georgetown University Med Center: 2013

EDUCATION & TRAINING

Georgetown University, Washington, DC
Master of Science in Computer Science
Bachelor of Science in Linguistics; Minor in Russian

TECHNICAL SKILLS

Programming Languages:	Python, Java, Scala, Javascript
Databases:	MySQL, PostgreSQL
Web Development:	Django, Flask, HTML/CSS
O/S:	Linux/Unix, Mac
System Administration:	Linux/Unix
Additional Languages:	Prolog, LISP, C/C++, Perl, shell scripting

COMMUNITY ENGAGEMENT

Election Officer, Arlington County VA

INTERESTS

Cycling, Running, Hiking, Cooking