Matthew Walters

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Professional Experience

Finance - Quantitative Engineering - Associate, *Fannie Mae*   04/2020 – present
Washington DC

- Spearheads the foundational work behind our batch processing strategy by designing a system that primarily leverages AWS Batch, Step Functions, and Lambda to perform up to 25 home price shifting runs concurrently, saving business users countless hours of run configuration time.
- Enhances Dodd-Frank Act and FHFA mandated stress testing by implementing cloud-based home price forecasting tools that reduce manual load on business users and improve scenario execution time and feasibility.
- Develops cloud-based quarterly model performance tracking to analyze region-level model error, improve model performance reporting, and enable future adjustments.
- Supports quarterly production efforts by reconciling key files in each step of the home price forecasting process between acceptance and production environments to satisfy audit requirements.
- Coordinates and contributes to idea sessions to establish an adequate system to address SAS Grid space scarcity and data excess, to thereby significantly reduce error-prone manual cleanup and improve space report cogency.
- Mentors contracted engineers by reviewing PRs, advising on code design, and hosting knowledge sharing sessions.
- Contributes to Agile processes by planning sprints, drafting user stories, and leading or participating in daily huddles, grooming sessions, and sprint retrospectives.
- Documents key deliverables including design documentation, test cases, and implementation plans.

Financial Engineering Intern, *Fannie Mae*   06/2019 – 08/2019
Washington DC

- Converted SAS code to Python and created a SAS-to-Python developer guide to facilitate more rapid development in my immediate team.
- Managed database entry using SQL Loader to reduce overall database item entry time by 4 hours.

Financial Engineering Intern, *Fannie Mae*   06/2018 – 08/2018
Washington DC

- Assisted in the ongoing automation of the error-prone task of mortgage forecasting to reduce total process time from 18 days to 8.
- Collaborated to transfer Excel-based financial modeling and forecasting tools (EUCs) to Python.

Financial Engineering Intern, *Fannie Mae*   06/2017 – 08/2017
Washington DC

- Automated development efforts by building a daemon to run monthly preprocessing and by writing utilities that inject SAS code into hundreds of parsed files.

Education

B.S. Computer Science, *University of Maryland, College Park*   08/2016 – 12/2019
Minor in Techology Entrepreneurship

Projects

LoL Data Analysis, *Python │ Pandas │ Scikit-learn*
- Utilized data/machine learning tools to identify key metrics correlated with wins.

WeCheck, *Python │ Flask │ SQLite*
- Built a collaborative to-do list web app with a SQL-based RDBMS to manage data.

Skills

Tools	Languages
AWS (Lambda, Step Functions, EC2, ECS, Batch, Route 53, SNS/SQS, S3, DynamoDB) APIGEE, Swagger, Git, BitBucket, Jenkins, Jira, Confluence, Excel	Python, Java, SQL, Javascript