

JEFFREY ZITELLI

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OBJECTIVE

Software engineer with experience in financial services and strong mathematics / scientific computing foundations seeking full-time onsite / hybrid engineering role within the New York City area.

EDUCATION

M.S. Computational and Applied Mathematics
The University of Texas at Austin, Austin, TX

December 2011

B.S. Computer Science and Engineering, *Magna Cum Laude*
The University of Pennsylvania, Philadelphia, PA

May 2005

CERTIFICATIONS

AWS Certified Developer - Associate

March 2024

EXPERIENCE

Software Engineer, Capital One

Feb. 2022 - Oct. 2022

- Developed AWS Lambda functions (Node.js runtime) for PoC implementation of new charge card features
- Orchestration of calls to various REST APIs using async / await patterns
- Implemented unit tests using the Jest framework
- Setup of mock endpoints / responses (using Mountebank) for API dependencies

Application Developer, Bank of America (contract position)

July 2020 - Apr. 2021

- Tasks centered on resolving issues of intraday risk measure delivery system that was being rolled out to an expanding set of trading desks and instrument types
- Maintenance and upgrade tasks for scheduled jobs which applied various data transformations to risk measures
- Added data sanity checks and email alerts to the jobs as issues with published data were identified

Software Engineer, HedgeServ

Jan. 2017 - Apr. 2020

- Member of General Ledger team, responsible for updating core database tables in response to trade booking and EOD processing - account values, positions, tax lots, etc.
- Owned various stories supporting general ledger, reporting, risk and valuations, including:
 - extended instrument pricing calculators to support Australian bond futures
 - introduced new archiving functionality using a third-party data warehousing vendor (Snowflake)
 - implemented exposure (risk) calculators for various instrument types (equity, options, etc.)
 - refactored reporting code to query data from newly developed REST API instead of SQL
 - implemented tax-lot level (vs. existing position-level) accrual transaction processing
 - investigation and mitigation of client performance issues (on both database and Python sides)

Client Facing Software Developer, Anaconda, Inc.

Sept. 2014 - May 2015

- Served as on-site consultant at J.P. Morgan Chase, as part of a small team developing and supporting a web application which enabled revisions to the bank's financial models to be tagged (by their developers at JPMC) with information per new regulatory requirements
- Worked mostly on the backend (Apache / Python / MySQL), which interfaced with version control systems (e.g. Git, Subversion) to automatically record any revisions that would require tagging
- Implemented support for an additional version control system (IBM Jazz SCM)
- Refactored reporting code (generation of HTML email bodies and PDF documents)

Graduate Research Assistant, UT Austin

June 2008 - June 2014

- Researched the effectiveness of various finite element analysis techniques (hp-adaptive and discontinuous Petrov-Galerkin) with applications toward simulating acoustic wave-propagation in shallow-water environments
- Developed implementations and scripts for research tasks in Fortran and Python

Software Engineer, Lockheed Martin

June 2005 - April 2007

- Programmed (C++) interface simulators for components of the Aegis Combat System
- Provided face-to-face support to tactical software developers at integration testing facilities

PUBLICATIONS

- Jeffrey Zitelli, Ignacio Muga, Leszek Demkowicz, Jay Gopalakrishnan, David Pardo, Victor Calo. **“A Class of Discontinuous Petrov-Galerkin Methods. Part IV: Wave Propagation Problems,”** in *Journal of Computational Physics*, 2011, 230, 2406-2432
- Leszek Demkowicz, Jay Gopalakrishnan, Ignacio Muga, Jeffrey Zitelli. **“Wavenumber explicit analysis of a DPG method for the multidimensional Helmholtz equation,”** in *Computer Methods in Applied Mechanical Engineering*, 2012, 126-138

TECHNICAL SKILLS

Python, JavaScript, SQL, Fortran, C/C++, NumPy, L^AT_EX, Git, Linux, Amazon Web Services