Jon Tedesco

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EDUCATION

UIUC

MS Computer Science, 2013 (3.95 GPA)
Data mining thesis with Jiawei Han and CS242 head TA managing 20 staff

UIUC

BS Computer Science, 2012 (3.97 GPA)
Undergrad thesis, TA for CS125 and CS242 class

AWARDS

Siebel Scholar 2013
Jump Trading Fellowship 2011
James Scholar, Dean's List, et al

COURSEWORK

Data Mining, Distributed Systems, Operating Systems, Cloud Computing, Computer Architecture, Data Structures, Databases, Linear Algebra, Machine Learning Graph Theory

PUBLICATIONS

Distributed Latency Profiling through Critical Path Tracing (Google Research Pre-Publication)
CoMoTo: the collaboration modeling toolkit (ITiCSE'11)
Theius: A Streaming Visualization Suite for Hadoop Clusters (IC2E'13)

SKILLS

Software Development, Project Management, People Management

TECHNICAL

Microservices, Production Deployment, Computer Architecture, Performance Analysis

LANGUAGES

Python, Java, SQL, C/C++, HTML/CSS, JS, Ruby, PHP

FRAMEWORKS

Django, Flask, Pandas, TensorFlow, jQuery, React.js, Guice, Angular, Spring, Ruby on Rails, node.js, Linux, Docker, AWS, Android

WORK EXPERIENCE

GOOGLE Staff Software Engineer, Tech Lead, Manager

Search Stack Performance Analysis | 2017-Present

- Founder, tech lead and manager for a distributed team (8-10 FTEs) that built end to end performance analysis tools for Search and Assistant
- Co-led and evangelized the Search efforts to reduce Search latency and capacity and build a culture of performance as a first-class citizen in the Search org
- Proposed, proved the viability of, and built (3 FTEs) an end-to-end Search latency benchmark to enable thousands of engineers to measure their latency impact to the Search stack before deploying to production (previously thought to be impossible)
- Proposed, designed, and built (2-3 FTEs) a latency static analysis tool used as part of the canonical Search latency launch process for all features
- Redesigned (6 FTEs) the core Search stack CPU benchmarks to improve their precision and accuracy by an order of magnitude and unify coverage across Search
- Proposed, designed, built a novel tool to both measure benchmark realism and improve data protection by isolating the ecosystem from production data
- Worked with cross-organizational partners to decompose the performance analysis problem area, build a cohesive strategy for Search, and merge multiple competing efforts in Search into a cohesive set of performance tools for Google engineers
- Mapped out Search workflows, customer needs, prioritization of varied use cases, and worked with cross-functional partners for long term planning

GWS Performance | 2013-2017

- Partnered with Search and Google-wide infrastructure engineers drive a performant microservice-based strategy in the Search stack
- Co-led team of 5 FTEs to design and build a parallel execution API used by thousands of novice engineers per month to substantially reduce Search latency
- Led team of 3 FTEs to build novel extensible, microservices-based automated CPU benchmarks used by thousands of Google engineers each month to measure their impact to GWS. These tools ran with zero maintenance cost for 5 years after development saving enough computing resources to pay for our team annually

UNIVERSITY OF ILLINOIS AT URBANA CHAMPAIGN

PURE founder, board member | 2010-2013

- Recruited graduate students, faculty members, and undergraduates to launch the UIUC CS branch of PURE, which boosts undergraduate research by connecting dozens of students and faculty for semester-long research partnerships

CoMoTo: Collaboration Modeling Toolkit | 2010-2013

- Developed Java, Python and d3.js based visualization tools using a software similarity engine (MOSS) to allow UIUC computer science professors to detect plagiarism in large undergraduate classes

FACEBOOK Software Engineering Intern | 2012

- Implemented performance analysis tool to enable real time newsfeed performance analysis by bridging memcached and MySQL systems
- Worked with the creator of ReactJS to rebuild core components using React and prototype other performance improvements to the newsfeed

DRW TRADING GROUP Software Engineering Intern | 2011

- Developed NPAPI-based plugin SockIt using C++ boost and websockets to enable performant web applications to process real time market data
- Measured (C++) and visualized (Python, JS) performance improvements of Intel's chipsets for matrix-based algorithmic trading strategies

BANK OF AMERICA Software Engineering Intern | 2010

- Developed Java backend FTP systems for FX and options trading depts