

# Jeffrey Tao

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## Research Interests

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Human-Computer Interaction, Programming Languages & Tools, End-User Programming, Visualization

## Education

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- 2021 - Present   [Columbia University](#)  
M.S. in Computer Science (anticipated May 2023)  
GPA: 4.0  
Advisor: Eugene Wu  
Thesis: A Framework for Materializing and Querying Data Structures for Visualization Applications
- 2012 - 2016   [Columbia University](#)  
B.S. in Computer Engineering  
GPA: 3.5

## Publications

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[J. Tao](#), Y. Chen, and E. Wu. “Demonstration of PI2: Interactive Visualization Interface Generation for SQL Analysis in Notebook”. SIGMOD 2022.

Y. Zhong, H. Li, Y. J. Wu, I. Zarkadas, [J. Tao](#), E. Mesterhazy, M. Makris, J. Yang, A. Tai, R. Stutsman, and A. Cidon. “XRP: In-Kernel Storage Functions with eBPF”. OSDI 2022. [Jay Lepreau Best Paper Award!](#)

## Honors

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Columbia Engineering – Advanced Masters Research Specialization – 2022

## Professional Experience

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- 2020 - 2021   [Senior Software Engineer, MongoDB - Cloud Alerts Platform](#)  
Stand-Alone Service Proof of Concept  
Scoped work, wrote specification, and prototyped organization's first service outside of legacy monolith using Spring Boot and gRPC.
- Commit Auto-Verification  
Lead a developer productivity project to audit source code commits and automatically backport commits to production via a Dockerized microservice.
- 2016 - 2020   [Software Engineer II, Microsoft - Outlook Web - Notifications](#)  
Data Sync Channel  
Owned server-pushed data synchronization channel. Implemented complex client-server state management, drove modernization efforts including multiple account support, cross-tab connection multiplexing, and embedding in other applications.
- Timers Service  
Architected and developed a microservice for scheduling network callbacks via Azure Service Bus to enable dependent services to implement time-based scenarios.
- Unified Notifications Service & UI  
Architected modern notification service as a stand-alone microservice with shared React.js-based UI across multiple clients. [Mentored an intern](#) who proved cross-platform UI code sharing.