

**Tanmay Ghai**  
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## EDUCATION

- University of Southern California** Los Angeles, CA  
 Master of Science in Computer Science July 2020 – Dec. 2021  
 Member of '20 Viterbi Summer Honors Program (VSOP), GPA: 3.95/4.0
- University of California, Berkeley** Berkeley, CA  
 Bachelor of Arts in Computer Science Aug. 2015 – May 2019  
 Member of CSUA, Sports Analytics Group at Berkeley, Dean's List: Spring 2018, Spring 2019

## EXPERIENCE

- Workday, Inc.** Pleasanton, CA  
 Software Development Engineer II November 2020 – Present
  - Engineer for the reporting and analytics engine - a multi-tenanted, performant, in memory processing engine responsible for over 2 billion+ queries monthly.
  - Building *Cosmos* - a framework for delivered analytic data sources and applications; performs 5x faster than existing RaaS reports and incremental data extraction using delta caches saves 99%+ of compute time. Helped ideate, design, and implement data-pipeline integration with new acquisition Peakon.
- Workday, Inc.** Pleasanton, CA  
 Software Development Engineer I July 2019 – October 2020
  - Engineer for the web-server infra team responsible for all in/e-gress traffic into Workday; led team as scrum-master.
  - Delivered multi-step transaction processing framework for personas, a thread-level refactoring of platform level logging, and a REST streaming initiative with the VSS team, scanning all uploads/download within Workday.
- Workday, Inc.** Pleasanton, CA  
 Software Development Engineering Intern May 2017(8) – August 2017(8)
  - Implemented a cross-stack debugging micro-service within the web-server backend to detect & alert errors in 2017.
  - Built an integrated full-stack, interactive scheduling platform for workforce management as part of WD32 in 2018.
- ServiceNow, Inc.** Santa Clara, CA  
 Cloud Platform Development Intern May 2016 – Aug. 2016
  - Collected and aggregated platform usage analytic data for over 500+ customers for trend analysis and anomaly detection via machine learning models (e.g. gradient boosting, SVM) and reporting tools (e.g. Kibana, Tableau).

## RESEARCH & PUBLICATIONS

- Information Sciences Institute, USC** Los Angeles, CA  
 Researcher – **USC D-Security**, advised by [Prof. Srivatsan Ravi](#). Jan 2021 – Present  
 My (broad) research interests are in privacy-preserving technologies and secure systems, particularly at the intersection of scalable distributed computing, data privacy, and machine learning. Currently, I'm looking into secure multi-party computation using applied cryptography. I was a graduate research asst. in the same group during my master's from July 2020 – Dec. 2021.
  - Yixiang Yao, **Tanmay Ghai**, Srivatsan Ravi, and Pedro Szekely. "AMPPERE: A Universal Abstract Machine for Privacy-Preserving Entity Resolution Evaluation", page 2394–2403. Association for Computing Machinery, New York, NY, USA, 2021. [\[paper\]](#)
  - Dimitris Stripelis\*, Hamza Saleem\*, **Tanmay Ghai\***, Nikhil Dhinagar\*, Umang Gupta, Chrysovalantis Anastasiou, Greg Ver Steeg, Srivatsan Ravi, Muhammad Naveed, Paul M Thompson, et al. "Secure neuroimaging analysis using federated learning with homomorphic encryption". In 17th International Symposium on Medical Information Processing and Analysis, volume 12088, pages 351–359. SPIE, 2021. [\[paper\]](#)

## PROGRAMMING SKILLS

- Languages:** Java, C++, Python, Scala, SQL, JavaScript    **Technologies:** Kafka, PyTorch, Spark, AWS, Git