

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: 3.925/4.0
- **University of California, Berkeley** Berkeley, CA
Bachelor of Arts in Computer Science Aug. 2015 – May 2019
Member of CSUA, Sports Analytics Group at Berkeley

EXPERIENCE

- **Workday, Inc.** Pleasanton, CA
Software Development Engineer II July 2019 – Present
I am a software engineer contributing to Workday's [Prism Analytics](#) product on the Business Intelligence (BI) team.
Formerly, I was an engineer on the ui-server team developing web-server frameworks & infrastructure where I was a SDE 1 from July 2019 – Oct. 2020 and an intern in the summers of 2017 & 2018.
 - **BI Data Services — Cosmos:** Working within the **Reporting & Analytics Engine** - a multi-tenanted, high performance, in-memory processing engine; building Cosmos - a framework to build delivered analytic data sources and content.
 - **UIS:** Developed **Hubs** (a multi-step transaction processing framework), implemented **Dovah** (a thread-level refactoring of platform level logging), and led the **VSS Streaming** initiative (a REST streaming approach to scan millions of uploads/downloads within Workday).
 - **Internships:** In 2018, built a **full-stack, interactive scheduling platform** for workforce management and in 2017, delivered a **cross stack debugging micro-service** to detect & alert errors.
- **ServiceNow, Inc.** Santa Clara, CA
Cloud Platform Development Intern May 2016 – Aug. 2016
 - **Licensing & Usage Analytics:** Analyzed usage analytics for over 500+ customers via Matlab and Tableau.

RESEARCH & PUBLICATIONS

- **Information Sciences Institute, USC** Los Angeles, CA
Graduate Research Assistant – **USC D-Security**, advised by [Prof. Srivatsan Ravi](#). July 2020 – Present
My research interests are in the intersection of distributed computing, cyber-security, data privacy and ML.
 - **Privacy-preserving entity resolution:** AMPPERE: A Universal Abstract Machine for Privacy-Preserving Entity Resolution Evaluation. **CIKM '21**. Yixiang Yao, **Tanmay Ghai**, Srivatsan Ravi, and Pedro Szekely. [[paper](#)]
 - **Secure federated learning:** Secure Neuroimaging Analysis using Federated Learning with Homomorphic Encryption. **SIPAIM '21**. Stripelis, Dimitris*, Hamza Saleem*, **Tanmay Ghai***, Nikhil J. Dhinagar*, Umang Gupta, Chrysovalantis Anastasiou, Greg Ver Steeg, Srivatsan Ravi, Muhammad Naveed, Paul M. Thompson and J. Ambite. [[paper](#)]

PROJECTS

- **Octane:** A simplified version of an SDN based Ethane-like system as described in the paper by Casado et al [here](#).
- **Secure Audit System:** A decentralized, secure audit system using RSA digital signatures, AES-128 and homomorphic encryption. Write-up can be found [here](#).
- **Morse Code Decoder:** CNN-LSTM-CTC deep learning model to decipher morse code irrespective of the medium used to generate it. Experiments and results can be found [here](#).
- **Real-time N-Body Cosmological Simulation:** N-Body cosmological simulation build with WebGL and ThreeJS to depict gas clouds coalescing with each other to form galaxies. Live demo and blog can be found [here](#).
- **Protein Structure Reconstruction:** Using FFT and backprojection, reconstructed a 3D visualization of a zika virus from a 2D image. Full write-up and experiments can be found [here](#).

PROGRAMMING SKILLS

- **Languages:** Java, C++, Python, JS, SQL, Scala **Technologies:** Kafka, Spring, PyTorch, Hadoop, Spark