

## EDUCATION

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- **University of Southern California** Los Angeles, CA  
Master of Science in Computer Science July 2020 – Dec. 2021  
**Relevant Coursework:** Analysis of Algorithms, Deep Learning & its Applications, Advanced Data Stores, Applied Cryptography, Security & Privacy in Big Data, Advanced OS, Advanced Networking, **Member of '20 Viterbi Summer Honors Program (VSOP)**
- **University of California, Berkeley** Berkeley, CA  
Bachelor of Arts in Computer Science Aug. 2015 – May 2019  
**Relevant Coursework:** Data Structures, Machine Learning, Advanced Algorithms, Databases, Networking, Operating Systems, Artificial Intelligence, Discrete Math and Probability Theory, Linear Algebra, Data Science, Computer Graphics

## EXPERIENCE

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- **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 working on scalable frameworks & infrastructure for our platform where I was a SDE 1 from July 2019 – Oct. 2020 and an intern in the summers of 2017 & 2018.
  - **BI Data Services:** Working on the **Reporting & Analytics Engine**, a multi-tenanted, high performance, in-memory processing engine to service over 1 billion monthly queries, and reports, dashboards, & visualizations built on those requests.
  - **UIS:** Developed **Hubs** (a multi-step transaction processing framework), contributed to **Dovah** (a thread-level refactoring of platform level logging), and led the **VSS Streaming** initiative (a REST streaming implementation to scan millions of uploads/downloads within Workday's various endpoints).
  - **Internships:** In 2018, built a **full-stack, interactive scheduling micro-system** for team scheduling and workforce management. & in 2017, delivered a **cross stack debugging microservice** for internal developers & external users to detect errors in the platform (scaled and dealt with millions of transactions per hour).
- **ServiceNow, Inc.** Santa Clara, CA  
Cloud Platform Development Intern May 2016 – Aug. 2016
  - **Licensing & Usage Analytics:** Wrote scripts and generated key reports on user behavior & usage analytics using machine learning via Matlab, Kibana, and Tableau to analyze trends for over 500+ customers

## RESEARCH & PUBLICATIONS

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- **Information Sciences Institute, USC** Los Angeles, CA  
Graduate Research Assistant – **USC D-Security**, advised by [Prof. Srivatsan Ravi](#). July 2020 – Present
  - **PPER:** Working on privacy-preserving entity resolution using homomorphic encryption (HE), and threshold HE for multi-party computational settings. Our paper titled **AMPPERE: A Universal Abstract Machine for Privacy-Preserving Entity Resolution Evaluation** was accepted at [CIKM'21](#) [pre-print].
  - **SHELFI:** Implementing and analyzing impact of HE encryption of model weights for privacy-preserving functionality within a secure, federated learning architecture. Our paper titled **Secure Neuroimaging Analysis using Federated Learning with Homomorphic Encryption** was accepted at [SIPAIM'21](#) [pre-print].

## PROJECTS

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- **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

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