Surya Keswani

Software Engineer with 4+ YOE in cloud infra, computer security, & computer vision.

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WORK EXPERIENCE

TikTok **2024 – Present**
Senior Software Engineer *San Jose, CA*

- Global Data Infrastructure & Site Reliability

Amazon **2022 – 2024**
Software Engineer - AWS EBS *Sunnyvale, CA*

- Played key roles in new feature launches, including the new C7g(n) EC2 instance
- Developed new cryptographic features that increase performance for AWS customers
- Managed & improved CI/CD infra, increasing successful deployments to the worldwide fleet of 7M servers
- Participated in oncall, managed customer tickets, investigated & remediated critical software defects
- Built new developer tools for increased confidence in new commits, including automated code coverage tools & new code testing features

Cyber Security Consultant **2020 – 2022**
Self-employed *Santa Cruz, CA*

- Built technical cybersecurity playbooks for a private equity firm & its portfolio companies
- Worked with security executives to author a book covering the largest data breaches in history + executive strategy for information security
- Advised a detailed strategy for network, application, cloud, & data security

Augmented Design Laboratory **2019 – 2020**
Research Intern *Santa Cruz, CA*

- Worked with Professor Jim Whitehead conducting research for Ford Motors
- Developed a detailed satellite image dataset for image segmentation
- Built optimized clustering model to analyze road infrastructure dataset
- Contributions used in creating testing infrastructure for autonomous vehicles

EDUCATION

University of California, Santa Cruz
M.S Computer Science w/ Thesis - 3.87 GPA *Santa Cruz, CA*

University of California, Santa Cruz
B.S Computer Science w/ Thesis – 3.66 GPA, Cum Laude & Honors in the Major *Santa Cruz, CA*

Stanford University Online
Advanced Computer Security Certificate *Online*

RESEARCH & PROJECTS

Improving Tree-Based Oblivious RAMs **2022**

- Studied state-of-the-art papers in the area of oblivious computation under Professor Ioannis Demertzis
- TreeORAM, PathORAM, RingORAM, & CircuitORAM are all multi-threaded for improved performance

Cryptographically Secure Messaging Interface **2021**

- Built cryptographically secure messaging platform
- Messages are hashed, digitally signed, & encrypted using SHA3-512, NIST P-521 Elliptic Curve & Simon Block Cipher
- Messages stored in text file in AWS S3 bucket for easy communication with another party

Building Chord **2021**

- Implemented a state-of-the-art computer network topography in C++
- Chord is a high performance, scale-able, peer-to-peer distributed hash table that uses consistent hashing

RECOMMENDATIONS

Recommendations are available upon request.