RITIKA SHRIVASTAVA

760-442-4743 | linkedin.com/in/ritikashrivastava/ | ritishri@berkeley.edu

EDUCATION

University of California, Berkeley **August 2018 - May 2021**
B.S. Electrical Engineering and Computer Science *Regents and Chancellor's Scholar (Top 2% of incoming class.)*
- **Computer Science:** Data Structures, Discrete Mathematics, Algorithms, Artificial Intelligence, Computer Architecture
- **Electrical Engineering:** Designing Information Devices and Systems I & II, Robotics I, PCB design
- **Statistics:** Probability and Random Processes

University of San Diego, GenCyber Scholarship **May 2017 - June 2017**
Sponsored by National Security Agency and National Science Foundation
- Manipulated Network Security levels through process isolation and domain separation
- Assessed risks and threats to a system using least Privilege and modularity techniques
- Ran forensics and applied cryptography techniques (Abstraction and Layering)

SKILLS

Languages Python, GoLang, Java, C, Scheme, SQL, RISC-V, HTML, CSS, JavaScript
Python Libraries ROS, Pandas, NumPy, OpenCV, sklearn, SciPy, TensorFlow
Security Tools & APIs Shodan.io, Censys, VirusTotal, Anomali, Nmap, Wireshark, Cuckoo

WORK EXPERIENCE

Microsoft: Defender ATP - DeepResearch Team
Software Engineering Intern *May 2020 - Aug 2020*
- Programmed in Python to expose insecure / unpatched internet facing assets to secops for secure configuration
- Investigated tools and designed an algorithm with scoring model to identify and map assets discovered to enterprise customers
- Identified internet facing servers belonging to enterprise segment and mapped out secure configurations to reduce risks

GoDaddy: Threat Intelligence & Detection
Software Engineering Intern *May 2019 - Aug 2019*
- Designed and developed an automated file hash enrichment and investigation process which tripled reports analysed
- Learned GoLang and understood concepts of concurrency (Goroutines) and templates
- Integrated plugins into the Threat Investigation API while maintaining clean interface design

PROJECTS

Robot Open Autonomous Racing (ROAR™) **FHL Vive Center for Enhanced Reality**
Researcher for a new AI racecar competition hosted in Berkeley *Aug 2019 - Present*
- Developed and designed the standardized SLAM (localization) platform for all race teams to use
- Presentation: http://vivecenter.berkeley.edu/wp-content/uploads/2020/03/Localization.pdf
- Programming a computer-vision model for ground-plane detection and based on the results identity static and dynamic obstacles
- Working under Prof. Allen Yang. Referred by Prof. S. Shankar Sastry

Computer-Vision Driven Human Robot Interaction **EECS C106A Final Project**
Built a functional, cable-actuated robotic hand *Aug 2019 - Dec 2019*
- Designed and programmed computer vision program to monitor human action (OpenCV and sklearn)
- Trained PID controller to ensure accurate detection and classification of action
- Integrated software (RaspberryPi) with hardware (servo motors) being controlled by Ardiuno to ensure 97% accurate Interaction
- Project Website: https://sites.google.com/berkeley.edu/eecs-c106a-final-rps-gp30/

Encrypted Contact Sharing through DNS **GoDaddy Intern Hackathon**
Used Goaddy tools and infrastructure to add an additional feature to domains *Aug 2019*
- Designed a double encrypted and signed process to enable domain's DNS records to exchange contact information
- Database generated using AWS mySQL and processes defined with AWS Docker

TEACHING EXPERIENCE

University of California, Berkeley
EECS C106A/C206A Lab Undergraduate Student Instructor *Aug 2020 - Dec 2020*
- Robotics I for Undergraduates and Graduate Students
- Taught by: S. Shankar Sastry

AWARDS

GoDaddy Intern Hackathon - Technical Innovation Award *August 2019*
Cal Alumni Association Leadership Award: 200 selected for impacting their community *August 2018 & August 2019*
Athena Pinnacle - Qualcomm Award for Computation: 1 student in San Diego, CA *May 2018*
NCWIT - National Honorable Mention: Top 9% selected on experience in computing. *April 2018*
Rotary Award for Leadership: Top 3 students selected for impacting their community *April 2018*