SHIVEN CHAWLA

+1-425-287-1677 | chawls@uw.edu | shivenchawla.github.io | in.linkedin.com/in/shivenchawla | Greater Seattle Area, WA

Work Authorization: 3-year STEM OPT (H1-B not required for 3 years).

EDUCATION

Master of Science in Cyber Security Engineering Jun 2017
University of Washington, Bothell, WA, United States GPA: **3.6/4.0**

- **OWASP and GRAY-HATS Member:** Taught *Android* & *Web Application Penetration Testing*. Git

Bachelor of Engineering in Computer Science & Engineering Jul 2014
Sharda University, Greater Noida, U.P., India GPA: **8.29/10**

CERTIFICATIONS & SKILLS

Certifications	*Oracle Certified Professional* **-** Java SE 6 Programmer
Programming Skills	Java, Android Development, Python, Linux Shell Scripting, C#, C/C++
Cyber Security	Malware Reverse Engineering, Pen-testing, Vulnerability Detection, Cyber Law and Compliance, Applied Cryptography, Threat Modelling, Risk Assessment
Tools/Platform	Machine learning, JIRA, Confluence, Page Object Model, Squish, Perforce, Git, Android Studio, Visual Studio, MATLAB, OMNET++, Raspberry Pi, Contiki/Cooja, KVM, VMware
Methodologies	SCRUM Sprint Cycles, AGILE, Secure-software Development Lifecycle (SDL)
Database	Oracle 10g, Magento
Cloud	Azure Cloud

WORK EXPERIENCE

SDET, Amazon AWS Lumberyard [Consultant from TEKsystems] Oct 2017 – Present

- Create and maintain automated test code automated test framework
- Plan, execute, and track test run results
- Achievement: Re-Architectured test framework models for –
  - 100%-page object validation and increased model robustness.
  - Reduced size of model code base from 2k-3k lines to 600+ lines.
  - Unblocked 20% blocked backlog and increased test coverage.

Graduate Research Assistant, University of Washington Aug 2016 – Jul 2017

- Developed machine learning based *portable* intrusion detection device for IoT to provide *Security as Service.*
- Achieved 85-*95% accuracy* in detection rate over *5,000,000 network transactions* and *18 seconds* training time.
- Skill Set: Python, machine learning, neural networks, Keras, TensorFlow, Linux shell, Raspberry Pi, CoAP, RPL, Contiki.
- Related Publications: Master's Thesis, Cyber Security Symposium 2017/ACM, RSA 2017 Conference Presentation.

Software Security Consultant, University of Washington Apr 2016 – Aug 2016

- Conducted workshops on Android Malware, and Android Security. Git
- Provided security reviews for software and network infrastructure.

Software Developer, Caterpillar India Jan 2015 – Apr 2015

- Developed and managed logistics control system on a SAP system using Java.
- Managed operations for logistics division globally.
- Automated 14 operational tasks.
- Reduced time consumed in operational tasks from 8 hours to 3 hours.

Software Development Engineer Intern, Beehive Systems Jun 2013 – Aug 2013

- Developed an archival tool to perform multimedia pre-processing and archival within 3 seconds of a *broadcast.*

PROJECTS

Virtual Student Advisor Sep 2016 – Present

Phase - I: Wiki

- Provided initial security assessment for developing artificially intelligent student advisor for community colleges.
- Designed operational and architectural security policies, conforming with *Cyber Laws*, and *FERPA*.
- Developed initial *Risk Assessment*, and *Threat Modelling* plan against information leak and privacy breach.
- Recommended *Data Anonymization & Aggregation*, *De-Identification*, *Purpose Selection*, and *Collection Limitation*.

Phase – II: Git

- Design and develop artificially intelligent student advisor for community colleges.
- Design mathematical model, based on linear-inequalities, to imitate role of student advisors in community colleges.
- Implement the mathematical model using linear-programming in MATLAB environment.
- Reduce human intervention towards creating academic plans for students by 40%.

Research on security in UMTS/2G-GSM networks Sep 2015 – Present

- Designed and developed *host-based* and *artificially-intelligent Stingray-Catcher* for UMTS and 2G mobile networks.
- Developed an *Android application (*Git*)* to record system parameters to detect anomalies in mobile-phone behaviour.

Stress Detection, Recognition & Relief Sep 2015 – Dec 2015

- Designed a cloud-based system using wearable sensors to monitor biological and physiological indicators of stress, and provide a remedial response to the end-users.
- Conceptualized for deployment in *Azure cloud* services.
- Proposed the concept at *Microsoft/UWB IoT Program*.

Information Retrieval System (Bachelor's Capstone) Jan 2014 – Jul 2014

- Developed a new information retrieval algorithm using the concept of *Posting Lists* abstract data-structure, in C#.
- Reduced the *time to search* by *30%,* for searching text-documents.

PUBLICATIONS

Deep Learning based Intrusion Detection System for Internet of Things Aug, 2017

Published in University of Washington ResearchWorks as master's thesis.

Security as a Service: Real-time Intrusion Detection in Internet of Things Apr, 2017

Published in ACM Digital Library for Cybersecurity Symposium 2017.

Fat time optimization protocol in cellular networks Jul, 2014

Published in IEEE Xplore for International Conference on Contemporary Computing.

ACHIEVEMENTS / RECOGNITION

- **RSA Conference 2017 Scholar**: 1 of 3 UW students invited, with scholarship, to attend RSAC 2017 among 57 others.
- **Microsoft IoT All Star - Honourable Mention** award for *Stress Detection, Recognition & Relief* project.
- Awarded partial scholarship towards Master's degree for Quarter 2 by CSS Department, UWB.
- Conditional scholarship by Sharda University for holding a GPA greater than 8.0 until 5th semester.