

MOHAMMED SALAH

Summary

I'm a computer science graduate from Portland State University. I'm interested in full stack development, back-end software development and security. I have a passion for learning and am excited to grow in my career as a software engineer. I'm currently searching for a full-time entry level or an internship position.

Employment

ARAMCO Abqaiq, Saudi Arabia
Instrument Technician June 2012 to Mar. 2013
Maintained electronics and monitored and analyzed the stream flow on site. Diagnosed faults and repaired them.

Projects

Choc-An Data Processing Software
A multi-purpose data processing software for a virtual hospital. It manages providers, members, payments and EFT.

Technologies: OOP concepts, waterfall development, continuous integration, Git, C++

XV6 Operating System
Modifications were added to XV6 under compilation conditional flags. I added System Calls, improved the run time by implementing MLFQ scheduling and process state transition , and improved the security by implementing file system protection.

Technologies: XV6, C

Phone Bill Application
A commercial phone billing software.It adds, retrieves, and deletes consumers' phone bills.

Technologies: Maven, Java, Servlet, GWT, Travis CI, and Git

Nike - Kratos - Clothing Analyzer
Nike instructed us to develop AI that finds clothing trends utilizing social media. However, after countless meetings, we as a team have narrowed down an MVP that can be completed in the scope of 12 weeks. We have implemented a clothing analyzer that can indicate the color, material, and style of clothing based on a photo.

Technologies: Tensorflow, Pytorch, Python, Pycharm, Keras, React Native, and Flask.

Activities

Misk /Tokai University electric car engineering training program. · Trainee 2019 to Current
Misk Foundation has selected me to participate in an intensive training program for the electric car engineering program at Tokai University. In the training program, we are learning technologies for electric car assembly. We are taking classes from a wide verity of fields such as material engineering, optimal battery for electric cars, solar use on cars, brush and brushless DC mortars, introduction to the power of electronics, and aerodynamics. We will do the chassis dynamometer, measurement of deformation on beams, solar cells properties, and wind tunnel tests. We will also be taking Japanese culture, psychology and philosophy of team making, Japanese business management, and sustainable development. The training program also includes company visits to Nikon, Nissan Oppama Plant, Toyota City, Cyberdyne Robo Care, and Toray Carbon Magic.

Classes of Interest

Computer Security
In this class, I used Linux tools and GDB to fetch sensitive information from software. I completed multiple CTFs in this course. I wrote a shellcode in C and in assembly. I also converted assembly code to hex string to make it ready for injection. I used NOP SLED. I modified shellcode to escape filters and gain access to programs with ASLR enabled. I used hashing and salting to encrypt user passwords. I retrieved a common set of passwords via the dictionary from an exposed hash and salt.

Network Security
In this course, I studied topics including historical and recent network-based attacks including denial of service attacks, anomaly and signature-based detection, firewalls, modern cryptographic protocols like IPSEC, SSL, and other application-layer security protocols.

Malware
The course explored a range of malware and modern defenses against it. I used tools such as IDA Pro and Radare2 to analyze malware programs.

Web Security
I was exposed to several website vulnerabilities and techniques to improve web security. I completed a substantial number of CTFs that simulate web vulnerabilities. I learned how to both leverage and prevent vulnerabilities like SQL injection, MongoDB injection, cross-site scripting, cross-site request forgery, broken authentication, and session management.

Contact

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Education

Portland State University Mar. 2019
B.S. Computer Science 2019

Skills

LANGUAGES

C/C++
Java
Python
JavaScript
HTML
CSS
Go

TOOLS/Frameworks/Engines

Maven
NodeJS
Travis CI
Express
Ajax
Bootstrap
Jquery
Moment
Mustache
React Native
Flask
Angular
GDB
Servlet
GWT
IDA Pro
Radare2
Linux
Git