Carlton Northern

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SKILLS

PROGRAMMING LANGUAGES	JavaScript, HTML, CSS, PHP, Java, C++, Python, shell
PLATFORMS	Android, iOS, Linux, Gitlab, Azure DevOps, JIRA, AWS
TECHNOLOGIES	Kafka, Docker, Kubernetes, RDF, TPM, ARM Trustzone, Postgres, Mongo
CONCEPTS	CI/CD, DevOps, IaC, Microservices, Regression Testing
CERTIFICATIONS	SAFe Program Consultant 4/5, Scrummaster, Scrum@Scale Practitioner
CLEARANCE	U.S. Top Secret

WORK EXPERIENCE

MITRE | PRINCIPAL SOFTWARE DELIVERY ENGINEER　　　　　San Diego, CA | Apr 2018 – June 2022

- Led the US Space Force Kobayashi Maru Blue Team (cross-FFRDC) to improve delivery of a large space domain awareness system in response to congressional inquiries.
- Reduced development teams lead time to deliver value and improved external collaboration with external partners of MITRE's Aviation Center by building a Kuberenetes-based, internal development platform in AWS Govcloud.
- Increased deployment frequency (by 5x) of a Navy undersea communications system via software modernization effort that included adopting concepts such as CI/CD, containerization, automated testing, and shifting left on security.
- Developed a novel security/privacy architecture and prototype for Dept. of Homeland Security (DHS) to automatically remove permissions from 'risky' mobile applications of enterprise user devices.

MITRE | GROUP LEADER / ENGINEERING MANAGER　　　　　San Diego, CA | August 2015 – June 2022

- Built, nurtured and led a healthy team of 6 - 12 Software Engineers via guidance, mentorship and support.

MITRE | LEAD SOFTWARE ENGINEER　　　　　Hampton, VA | March 2014 – April 2018

- Aided DHS and US Army in the adoption of dynamic and static mobile application security analysis tools via an evaluation commercial offerings. Developed the MITRE Vulnerable and Privacy Violating set of mobile apps to determine the tools ability to find issues of concern.
- Provided consulting services to the US Army resulting in the creation of a mobile app development capability and app store for training and education purposes. https://rdl.train.army.mil/catalog/tag/home
- Led a multi-team research effort to build a multi-domain command and control architecture via rapid prototyping and experimentation. Has since been transitioned to operational use by the Air Force.

MITRE | SENIOR SOFTWARE ENGINEER　　　　　Hampton, VA | June 2008 – March 2014

- Created and implemented an enterprise mobile security strategy for the White House Comminications Agency that resulted in first agency-wide smartphone deployment.
- Operationalized capability with the Special Operations Forces to share unit location information via SMS (no cellular data network) through a custom developed Android app.

GDIT | SOFTWARE ENGINEER　　　　　Suffolk, VA | May 2005 – July 2008

- Improved the US Joint Forces Command's ability to conduct modelling and simulation exercises by developing a unit order of battle data correlation tool (Java) improving upon a previously manual process using spreadsheets.

EDUCATION

OLD DOMINION UNIVERSITY | MS, BS, COMPUTER SCIENCE　　　　　Norfolk, VA

- Master's project presented a novel approach to finding members of an organization online using social media profile friend links.

ODU WEB SCIENCE RESEARCH GROUP | RESEARCH ASSISTANT　　　　　Norfolk, VA | May 2009 – May 2011

- Developed the Firefox Add-On ArchiveFacebook (JavaScript) that provides Facebook users the ability to save and access their data offline (100k+ users).
- Created the open source project nickname-and-diminutive-names-lookup as a simple way to find variations of first names.

PUBLICATIONS

- MOBILE PER-APP SECURITY SETTINGS - Future of Information and Communications Conference (FICC) 2021
- EVALUATING MOBILE APP VETTING INTEGRATION WITH ENTERPRISE MOBILITY MANAGEMENT IN THE ENTERPRISE - Department of Homeland Security 2019
- MITRE VULNERABLE AND PRIVACY VIOLATING MOBILE APPS - Github 2017
- ANALYZING THE EFFECTIVENESS OF APP VETTING TOOLS IN THE ENTERPRISE - Android Security Symposium 2017
- AGILE COST ESTIMATION - Acquisition in the Digital Age 2016
- TPM 2.0 MOBILE SPECIFICATION - Trusted Computing Group 2014
- AN UNSUPERVISED APPROACH TO DISCOVERING AND DISAMBIGUATING SOCIAL MEDIA PROFILES - Knowledge Discovery and Data Mining (KDD) Conference 2011.
- HANDBOOK FOR IMPLEMENTING AGILE IN DEPARTMENT OF DEFENSE INFORMATION TECHNOLOGY ACQUISITION - MITRE Technical Papers 2010