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 (Java, K8s, PostGres).
- 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 (Java, EKS, Concourse, SonarQube, Nexus).
- 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 (Azure DevOps, Docker).
- 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 (Python, Firebase, Android).

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

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

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

- 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 (Java, Kafka, Microservices, Mongo, Gitlab).
- 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

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.
- Proved the concept of controlling an Army munitions system via smartphone by developing a Windows (Java) and Android app prototype.

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 (Java, RDF).

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