

# Donald J. Davis

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## PROFESSIONAL SUMMARY

Software Engineer with experience building full stack web applications with various languages and tools including: *HTML5, CSS3, JavaScript (ES6), C#/ASP.NET Core, Java, MySQL, Bootstrap, Node.js, Vue.js and MongoDB*. Two post-graduate degrees with courses in systems engineering, object-oriented software design, database development, orbital mechanics and spacecraft design. Keen analytical thinker and savvy problem solver with excellent written and oral communication skills. Technically astute leader with 25 years of experience operating Department of Defense space and nuclear weapon systems and managing cross-functional teams.

## SKILLS AND EXPERIENCE

### Software Application Development

- Designed and built *Keeprr*, a Pinterest-like app utilizing a *Vue.js/JavaScript* front end and a *C#/ASP.NET Core* backend. Data is persisted via a *Gear Host MySQL* database. Basic user-auth implemented.
- Developed a *Trello*-like planning application using a *Vue.js* front-end and *Node.js* backend that allows the user to build boards with attached lists and tasks. Data is persisted via a *MongoDB* database.
- Built a *Momentum*-like app utilizing *Axios* to perform CRUD operations to multiple APIs. Desktop provides random background images, current local weather and allows the user to create and edit task lists.
- Developed a music search application that helps a user to find all tracks by a given artist in the iTunes API. App built utilizing an MVC architecture and *Bootstrap* styling. Later refactored to utilize the *Vue.js* framework on the front-end and a *Node.js/MongoDB* backend to store user playlists.
- Designed, built and tested a configurable satellite model in MATLAB for threat modeling and analysis of satellite systems to support National Air and Space Intelligence Center
- Created mission planning tool in Microsoft Excel to process current satellite position and velocity data and project future visibility windows for specified geographic positions
- Developed a finite element model in MATLAB to analyze orbital forces and stresses on space structures
- Versed in web application development, object-oriented programming, design patterns, data structures and algorithms, relational database design, SQL queries and SCRUM methodology

### Leadership and Management

- Served as product owner for CodeWorks capstone project; led development of community “bulletin-board” application utilizing *Vue.js* front end, *Node.js/Express/MongoDB* back-end and sockets for real-time updates
- Second in command of Air Force schoolhouse for space and missile systems; directed training programs for 650+ students and 34 DoD space and missile systems
- Managed operations of 100+ personnel securing and maintaining 150 Intercontinental Ballistic Missiles (ICBM); recognized by Commander, U.S. Strategic Command as the best ICBM ops unit in the Air Force
- Led staff of 10 in developing policy and procedures for the Air Force Space Surveillance Network; managed \$100M annual operations budget, improved standardization across 31 sensor sites around the world
- Led 14-person cross-functional team to evaluate adequacy of new Air Force personnel reliability program; reported results AF senior leadership, improved reliability monitoring for 26,000 security professionals
- Deployed to the Arctic Circle for 365-days; led coalition operations center in monitoring foreign missile launches and providing orbital safety data to the North American Aerospace Defense Command (NORAD)

## **Communications**

- Created first-ever Defense Satellite Program operations manual; integrated data from five sources into a single comprehensive reference for satellite command and control mission
- Prepared reports for the Secretary of the Air Force and the Inspector General of the Air Force providing independent assessments of the safety and security practices of the Air Force's nuclear-capable units
- Authored procedures and actions to implement historic \$426M warhead safety upgrade to nuclear systems
- Hand-picked to brief numerous distinguished visitors and DoD leaders during 25-year Air Force career

## **Training & Evaluation**

- Sole certification authority and lead instructor for 320 nuclear cryptographic code handlers
- Developed and maintained training and quality assurance programs for multiple Air Force Units
- Lead satellite system operations evaluator; supervised creation and administration of tests and performance-based scenarios to validate mission readiness and proficiency of 100 operators; reviewed all operational procedures for accuracy and standardization

## **PROFESSIONAL EXPERIENCE**

- *Full-Stack Development Student*, CodeWorks 2018
- *Director of Inspection Oversight*, Air Force Inspection Agency 2014-2017
- *Air Force Fellow*, Los Alamos National Laboratory 2013-2014
- *Deputy Commander*, 381st Training Group 2012-2013
- *Commander*, 741st Missile Squadron 2010-2012
- *Executive Officer*, Twentieth Air Force 2009-2010
- *Director of Operations*, 321st Missile Squadron 2007-2009
- *Senior Codes Controller*, 90th Operations Support Squadron 2006-2007
- *Graduate Student*, Air Force Institute of Technology 2004-2006
- *Space Surveillance Branch Chief*, Headquarters Air Force Space Command 2003-2004
- *Executive Officer and Chief of Advanced Technologies*, Space Warfare Center 2001-2003
- *Graduate Student*, Air Force Institute of Technology 1999-2001
- *Strategic Missile Systems Operator and Evaluator*, 341st Missile Wing 1996-1999
- *Radar Systems Operator and Chief of Training*, 12th Missile Warning Squadron 1995-1996
- *Satellite Systems Operator and Evaluator*, 1st Space Operations Squadron 1992-1995

## **EDUCATION**

- Immersive Full Stack Developer Course, Boise Codeworks, 2018
- Master of Science, Systems Engineering, Air Force Institute of Technology, 2006
- Master of Science, Space Operations, Air Force Institute of Technology, 2001
- Bachelor of Science, Engineering Mechanics, United States Air Force Academy, 1992

## **AWARDS & HONORS**

- Distinguished Graduate, Air Force Institute of Technology 2006
- Air Force Chief Scientist Systems Engineering Award 2006
- Distinguished Graduate, Phased Array Radar Operators Course 1995
- Distinguished Graduate, Defense Satellite Program Operators Course 1992