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|  | Jonathan King***Automation | Cloud | DevOps | Full-Stack | Modernization | Testing | Visualization***  Top Secret with SCI Eligibility  12+ years’ experience  M.S. in Physics  Huntsville, Alabama, United States  [(256) 710-7018](tel:+12567107018)  [jonathan-lee-king](https://www.linkedin.com/in/jonathan-lee-king/)   [Jonathan.Lee.King@proton.me](mailto:Jonathan.Lee.King@proton.me)  [Portfolio](https://portfolio-jonathan-lee-kings-projects.vercel.app/) |  |

# SUMMARY

Versatile and *solution-oriented* **Full-Stack Software Developer** with **over a decade of experience** driving innovation in complex system integration, data modernization, DevOps, and data visualization. Proven track record of architecting and delivering advanced software solutions for missile defense, scenario simulation, and analytical systems. ***Frequently recognized for pioneering approaches*** to tough technical challenges and making high-impact contributions to mission-critical defense initiatives.

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| * *Self-Starter with Ownership Mentality and Delivery Focus* * *Proactive, Goal-Oriented Problem Solver with a Drive for Excellence* * *Grounded in Execution with Extreme “Attention to Detail”* | * *Team-Oriented with a Passion for Working with Great People* * *Meticulous and Imaginative with a Focus on Elegant Solutions* * *“Idea-Factory” Mindset with a Drive to Inspire and Invent* |

# EXPERIENCE

## Senior Full-Stack Software Developer BlueHalo

### Missile Defense Agency (MDA/BC) April 2022 - July 2024, Huntsville, AL

* Supported MDA/BC in developing a framework that allowed multiple elements from the BMDS to be brought into a single application for scenario planning. The team met the original objectives defined in the Statement of Work (SOW) *1.5 years ahead of schedule.*
* Spearheaded onboarding new developers by writing comprehensive documentation, providing automation scripts, and routine pair programming.
* Automated the setup of new development environments for all developers, including the IDP Lab (Redstone Arsenal, Bldg. 5400).
* Built an unclassified [Ubuntu](https://ubuntu.com/) 22 ISO with pre-configured software to support off-site development; significantly contributed to the corresponding classified ISO to ensure near-identical environments and *streamline cross-domain workflows*.
* Engineered and deployed *nightly automation scripts* at the customer site to support a ***Continuous Delivery*** pipeline, streamlining the routine delivery of [GitLab](https://about.gitlab.com/) repositories, [Docker](https://www.docker.com/) images, and [npm](https://www.npmjs.com/) packages with minimal manual intervention.
* Researched, optimized, and automated critical development workflows — including cluster backups, lint/build/test/deploy processes, [GitLab CI/CD pipelines](https://docs.gitlab.com/ci/pipelines/), hot-reloading of containerized deployments ([nodemon](https://www.npmjs.com/package/nodemon), [pm2](https://www.npmjs.com/package/pm2), [Tilt](https://tilt.dev/)), [Git hooks](https://git-scm.com/book/en/v2/Customizing-Git-Git-Hooks), and container orchestration - significantly boosting team velocity and development efficiency.
* Streamlined the [Kubernetes](https://kubernetes.io/) release process by architecting a simplified API abstraction layer over [cdk8s](https://cdk8s.io/), reducing deployment complexity and improving maintainability across environments.
* Developed an interactive Kubernetes deployment tool enabling dynamic provisioning of base manifest files to both local ([MicroK8s](https://microk8s.io/)) and remote ([AKS](https://azure.microsoft.com/en-us/products/kubernetes-service), [DoD SAFE](https://safe.apps.mil/), physical delivery) clusters, facilitating consistent and repeatable multi-environment deployments.

## Software Engineer IV Penta Research, Inc.

### Missile Defense National Team (MDNT) February 2022 - March 2022, Huntsville, AL

* Supported Missile Defense National Team (MDNT) in a data modernization effort.
* Researched the extraction, standardization, and storage of large datasets using a relational database.
* Initial development towards a single source of truth for all tools to enhance data consistency and integrity.
  + *Overcame* the absence of a viable PDF parser ([Node](https://nodejs.org/en), [Java](https://www.java.com/en/), [MATLAB](https://www.mathworks.com/products/matlab.html)) by creatively leveraging [jQuery](https://jquery.com/) within Firefox Developer Tools to extract data, ***delivering a working solution in days for a task estimated to take 9+ months using traditional tooling***.

### Small Business Innovation Research (SBIR) – Phases I, II, II Extension January 2018 - March 2022, Huntsville, AL

* Supported multiple SBIRs for Jeremy Gneiting at U.S. Army DEVCOM Aviation & Missile Center (AvMC) and Tim McCarter (1st Edge) to streamline the scenario design process for MDA ground tests.
* Standardized data models across multiple organizations.
* Conducted research and development to assess AI/ML feasibility for scenario design.
* Developed single-page and multi-page web applications ([ASP.NET Core](https://dotnet.microsoft.com/en-us/apps/aspnet), [C#](https://learn.microsoft.com/en-us/dotnet/csharp/), [TypeScript](https://www.typescriptlang.org/), [jQuery](https://jquery.com/), [MS SQL Server](https://www.microsoft.com/en-us/sql-server), [Neo4j](https://neo4j.com/product/neo4j-graph-database/), [Telerik](https://www.telerik.com/), [D3](https://d3js.org/), [CesiumJS](https://cesium.com/platform/cesiumjs/), [SignalR](https://dotnet.microsoft.com/en-us/apps/aspnet/signalr)) to showcase the underlying data models, capture Scenario Designers' SME knowledge, and automate portions of the design process.
* ***Derived*** *and implemented* a graph-theory-based greedy algorithm to reduce the number of required trajectories for scenario coverage - ***automating a workflow previously handled by a small team*** and *solving a technical challenge*that persisted for over a year.

### US ARMY DEVCOM AvMC Rapid Scenario Prototyping (RaSP) January 2018 - February 2022, Huntsville, AL

* Supported Rapid Scenario Prototyping (RaSP) for Steven Carr (S3I) and David Jones (MDA/DTG).
* Spearheaded technology research and adoption, providing training to accelerate team proficiency in new tools and technologies.
* Initiated and led the lab’s cloud migration effort by:
* Repurposing an unused internal server running [CentOS](https://www.centos.org/) 7 into a [Docker](https://www.docker.com/) host to accelerate the lab’s specified cloud readiness; this *self-directed* effort filled a critical infrastructure gap and enabled external stakeholders to *deliver containerized applications* ***in minutes rather than days***—***eliminating a multi-month stall*** in capability growth.
* *Avoiding a critical productivity roadblock* during a *4-month period without a functional development workstation* by personally purchasing hardware, clustering rack-mounted servers at home, and *self-hosting* a secure [Proxmox](https://www.proxmox.com/en/)-based environment with [Cloudflare](https://www.cloudflare.com/), [Nginx Proxy Manager](https://nginxproxymanager.com/), [Let’s Encrypt](https://letsencrypt.org/), etc. This system enabled the testing of infrastructure tools, validation of [CentOS](https://www.centos.org/) updates, preparation of terrain data for [CesiumJS](https://cesium.com/platform/cesiumjs/), and staging of commercial off-the-shelf software — *ensuring uninterrupted progress on high-priority projects without access to standard developer resources*.

## Software Engineer III Torch Technologies

### Missile Defense Agency (MDA/TPO) August 2016 - January 2018, Huntsville, AL

* Supported MDA/TPO in building a virtual Terminal High Altitude Area Defense (THAAD) Skills Trainer (TST).
* Lead architect accountable for designing, building, testing, and integrating a Relational Database Management System (RDBMS) into TST.
* Led development of all backend services for the THAAD Skills Trainer, including a suite of custom [JavaFX](https://openjfx.io/) desktop applications that empowered SMEs, developers, artists, and leadership to input, configure, and manage system data efficiently.
* Created *automated* reverse-engineering tools for extracting data from THAAD's Interactive Electronic Technical Manual (IETM).
* Rebuilt the Task Allocation Matrix for the THAAD Program Office (TPO), completing a task previously deemed *impossible* by the customer.
* Primary developer corporate-wide for [Microsoft HoloLens](https://learn.microsoft.com/en-us/hololens/) (augmented reality), focusing on research and development for warfighter training. Key projects included interactive, distributed AN/TYP-2 models, hardware/software integration, and object recognition built using [Unity](https://unity.com/) and [C#](https://learn.microsoft.com/en-us/dotnet/csharp/).
* Delivered live augmented reality *demonstrations* to a wide range of stakeholders — including *military leadership, congressional representatives, and THAAD operators* — showcasing advanced training capabilities and real-time system interaction.

### Missile Defense Agency (MDA/DVS) July 2014 - August 2016, Huntsville, AL

* Supported MDA/DV/DVS for Richard Paladino in streamlining flight test analysis.
* Co-developed a situational awareness platform integrated with [NASA WorldWind](https://worldwind.arc.nasa.gov/) for real-time 3D visualization of telemetry data during flight tests, enhancing spatial understanding and real-time decision-making.
* **Mission Analysis Toolkit:** Developed a comprehensive toolkit for real-time and post-processed telemetry data recording, retransmission, visualization, and analysis across geographically distributed locations while ***bridging*** previously ***stove-piped tools*** on a common communication bus. ***Reduced analysis time from weeks to near-real-time,*** enabling immediate issue resolution and standardized reporting during events. *Received multiple commendations (see below)*.
* *Personally contributed to every phase of the software development lifecycle (SDLC) for all toolkit applications.*
* *Briefed Richard Matlock (Program Executive for Advanced Technology - MDA/DV), Joseph Keelon (Deputy Program Executive for Advanced Technology - MDA/DV), numerous SESs within MDA, General Atomics, and other contractor leadership.*
* ***Asynchronous* MATLAB API:** Engineered a custom, multi-threaded asynchronous [MATLAB](https://www.mathworks.com/products/matlab.html) API using [Java](https://www.java.com/en/) (bypassing limitations of [MathWorks’ Parallel Computing Toolbox](https://www.mathworks.com/products/parallel-computing.html)), enabling valid *real-time* data stream subscriptions - previously deemed *impossible* by senior-level Ph.D. scientists and engineers.
* **Data Stream Manager API:** Developed an additional multi-threaded asynchronous [MATLAB](https://www.mathworks.com/products/matlab.html) API (using [Java](https://www.java.com/en/)) for aggregating and filtering high-volume telemetry streams, streamlining workflows, and reducing manual data preparation.
  + - Achieved a ***30,000% performance boost*** by reducing [MATLAB](https://www.mathworks.com/products/matlab.html) data plot generation time from ***20 minutes to 4 seconds*** *- one of many efficiency improvements delivered*.
* **MDIOC Surrogate:** Developed a playback tool to emulate telemetry from previous flight tests, ***eliminating external dependencies*** and *saving significant resources*. Enabled comprehensive system verification, realistic simulations, and independent TCP/IP and UDP connectivity testing.
  + - Provided critical diagnostic capabilities previously unavailable, *uncovering hidden connectivity issues* between MDA/DVS and MDIOC.
* **Soft Router:** *Identified a critical gap* in real-time telemetry data routing and analysis capabilities. *Proposed, co-architected, implemented, and maintained* a robust, multi-threaded software router leveraging TCP/UDP sockets for data monitoring, recording, retransmission, and annotation across distributed environments.
  + - Independently validated by multiple senior-level Ph.D. research scientists at Johns Hopkins University (JHU) Applied Physics Laboratory (APL); extensive peer review found ***zero defects***, demonstrating robustness and exceptional code quality.
    - Revealed critical system limitations, *directly inspiring the development of all other tools within the Mission Analysis Toolkit*.
* Additional Tools and Automation:
  + - **Deployment Pipeline:** *Automated* software build, packaging, and distribution across shared drives.
    - **Interactive Plot Generator:**  *Streamlined* creation of custom dashboards for real-time and post-processed telemetry data.
    - **Time Conversion Tool:**  Enabled *seamless* conversions between multiple mission-critical time standards (GPS, UTC).

## Research Assistant / Teaching Assistant Auburn University

### Allison Laboratory August 2012 - May 2014, Auburn, AL

* Assisted faculty in delivering undergraduate physics instruction, reinforcing core concepts through hands-on support and student interaction.
* Selected as *1 of only 4 students* to staff the Physics Help Room, delivering peer tutoring across a range of undergraduate physics curricula.
* Collaborated with the Computational Physics team by invitation, contributing to the development of advanced plasma physics algorithms for execution on [Titan](https://www.olcf.ornl.gov/olcf-resources/compute-systems/titan/), Oak Ridge National Laboratory’s high-performance supercomputer.

# AWARDS & HONORS

## Certificate of Achievement: "...providing exceptional service..."

#### Penta Research, Inc. (MDA/DTG) • 2022

"Recognized for **providing exceptional service** in the last week of your tenure within the RaSP Lab."

## Certificate of Achievement: "Above and Beyond"

#### Penta Research, Inc. (1st Edge, LLC) • 2019

"Recognized for your continued efforts going **'Above and Beyond'** supporting Penta's SBIR Customer."

## Informal Customer Commendation: Rebuilding the Task Allocation Matrix

#### Torch Technologies (MDA/TPO) • 2017

* Earned exceptional customer praise for engineering an end-to-end ETL (Extract, Transform, Load) solution that extracted data from technical sources, reshaped it for analysis, and populated the Task Allocation Matrix — successfully completing a task previously deemed *impossible* by the customer and enabled critical issue resolution.

## Customer Commendation: "...deserve this recognition!"

#### Missile Defense Agency (MDA/DVS) • 2016

* Received group recognition from the former MDA Director, Vice Admiral James D. Syring, at an Awards Ceremony and through an agency-wide *"Communications Roundtable"* email.

"MDA ALL: Message From The Director -- All Hands Special Recognition

To the Men and Women of the Missile Defense Agency:

We took time on Monday to give special recognition to individuals and teams who have **excelled in their jobs** and **truly made a difference within the Agency**.  I would like to recognize a few **additional individuals** for their **outstanding achievements to both the Agency and their organizations.**

Janet Fisher and the **Advanced Concept Assessment Analysis Team** in DV have **distinguished themselves** with their **outstanding work to prepare for, execute, and analyze the results from our Reaper campaign** during the January GM controlled test vehicle flight test (CTV-02+).  Their work is establishing the analytical and empirical evidence necessary for us to expand the sensor grid options we can provide to the warfighter in the future...."

* Received written commendation from MDA/DV/DVS Deputy Director Janet Fisher.

"**Jonathan King**, one of your younger employees, is one of the critical team members who **really deserve this recognition!**"

* In addition to the formal recognition, I received personal commendations from leadership across multiple organizations — including Johns Hopkins APL, General Atomics, Torch Technologies, MTSI, and senior MDA officials — ***who credited my contributions as critical to the mission’s success*** and took time to personally acknowledge my impact in *one-on-one settings*.

# CERTIFICATIONS

## *(In Progress) Security+*

#### *CompTIA • 2025*

## Fundamentals of Ballistic Missiles

#### Defense Intelligence Agency Missile and Space Intelligence Center • 2014

# EDUCATION

## Master of Science in Physics

#### Auburn University • Auburn, AL • 2014 • 3.3

* Concentration in Computational Theoretical Atomic Physics.
* Awarded full tuition waiver and annual stipend.
* Completed three doctoral courses while pursuing the master’s out of a personal *passion* for the topic and a *desire* to deepen my understanding.

## Bachelor of Science in Physics

#### Minor in Mathematics • University of North Alabama • Florence, AL • 2012 • 3.5

* Attained the highest GPA in physics coursework within the graduating class.
* Inducted into the National Physics Honor Society, [Sigma Pi Sigma](https://students.aip.org/sigma-pi-sigma).
* Completed nearly all requirements for a Minor in Economics.

# PUBLICATIONS

## R-matrix with pseudostates study of single photon double ionization of endohedral Be and Mg atoms

#### Journal • Journal of Physics B: Atomic Molecular and Optical Physics • 2015

## Atomic swelling upon compression

#### Journal • Journal of Physics B: Atomic Molecular and Optical Physics • 2012

## Diffuse versus square-well confining potentials in modelling A@C60 atoms

#### Journal • Journal of Physics B: Atomic Molecular and Optical Physics • 2012

* Received numerous grants (NSF Grant No. PHY-0969386, DAMOP, [Alabama Academy of Science](https://www.alabamaacademyofscience.org/)) to [present research findings](https://meetings.aps.org/Meeting/DAMOP12/Session/P7.5).
  + Anaheim, California: [43rd Annual Meeting of the APS Division of Atomic, Molecular, and Optical Physics (DAMOP) Conference](https://meetings.aps.org/Meeting/DAMOP12/Content/2336)
  + Tuskegee, Alabama: Eighty-Ninth Annual Meeting of the [Alabama Academy of Science](https://www.alabamaacademyofscience.org/), Inc.
* *As of 4/29/2025:* "Compared to all research items: This item's Research Interest Score is higher than 92% of research items on ResearchGate."

# REFERENCES

|  |  |  |
| --- | --- | --- |
| Personal | Professional | |
| Andrea Wiley-Bigelow Director, Office of Executive Services  U.S. Army Materiel Command  [andrea.e.wiley-bigelow.civ@army.mil](mailto:andrea.e.wiley-bigelow.civ@army.mil)  [(256) 450-8958](tel:+12564508958) | Brian Boyd Senior Software Engineer  BlueHalo  [boyd8811@hotmail.com](mailto:boyd8811@hotmail.com)  [(256) 651-9449](tel:+12566519449) | Jonathan Mattox Principal Software Engineer  ASRC Federal  [mattoxjr77@gmail.com](mailto:mattoxjr77@gmail.com)  [(256) 348-1977](tel:+12563481977) |
| Grant Heinrichs Threat Information Warfare Program Integrator  Noblis ESI  [grant.heinrichs@noblis-esi.com](mailto:grant.heinrichs@noblis-esi.com)  [(540) 538-5708](tel:+15405385708) | Brian Cothren Senior Manager  Torch Technologies  [brian.cothren@gmail.com](mailto:brian.cothren@gmail.com)  [(256) 319-6336](tel:+12563196336) | Markus Kreitzer Senior Research Engineer (AI/ML)  PeopleTec  [markus.kreitzer@gmail.com](mailto:markus.kreitzer@gmail.com)  [(334) 703-8887](tel:+13347038887) |
|  | Chris Rygaard Chief Technology Officer  Blend Dynamics  [chris.rygaard@blenddynamics.com](mailto:chris.rygaard@blenddynamics.com)  [(408) 656-1999](tel:+14086561999) | Simon Enouen Coach Instructor Level 2 (Aerospace Engineer)  iFly Seattle (Torch Technologies)  [simonenouen@outlook.com](mailto:simonenouen@outlook.com)  [(405) 517-6631](tel:+14055176631) |
|  | David Jones "DJ" Software Engineer Team Lead  Missile Defense Agency  [james.d.jones@mda.mil](mailto:james.d.jones@mda.mil)  [(404) 423-2676](tel:+14044232676) | Travis Campbell Systems Engineer  Radiance Technologies  [clemsonee2002@yahoo.com](mailto:clemsonee2002@yahoo.com)  [(256) 221-1770](tel:+12562211770) |

# SKILLS

**\* as a Service:** [Kasm](https://kasmweb.com/) ([DaaS](https://www.ibm.com/think/topics/desktop-as-a-service)), [Vercel](https://vercel.com) ([PaaS](https://www.ibm.com/think/topics/paas))

**Artificial Intelligence (A.I.):** [ChatGPT](https://openai.com/index/chatgpt/) Plus v3+ ([OpenAI API](https://openai.com/api/), [Custom GPT's](https://openai.com/index/introducing-gpts/), [Web](https://chatgpt.com/)), [Claude](https://claude.ai/) Pro v2+, [CrewAI](https://www.crewai.com/), [Cursor](https://www.cursor.com/en), [Gemini](https://gemini.google.com/app) v1+, [Grok](https://grok.com/) v1+ (X - Premium+), [GitHub Copilot](https://github.com/features/copilot) (2022+), [GitHub Spark](https://githubnext.com/projects/github-spark) (2025+), [Hugging Face](https://huggingface.co/), [LM Studio](https://lmstudio.ai/) (since prerelease), [Microsoft Copilot](https://copilot.microsoft.com/) *(formerly Bing Chat)*, [Ollama](https://ollama.com/)

**Cloud:** [Cloudflare](https://www.cloudflare.com/), [Let’s Encrypt](https://letsencrypt.org/), [Nginx Proxy Manager](https://nginxproxymanager.com/), [Traefik](https://traefik.io/traefik/)

**Code Styling:** [ESLint](https://eslint.org/), [Prettier](https://prettier.io/), [SonarLint](https://www.sonarsource.com/products/sonarlint/)

**Databases:** [Firebase](https://firebase.google.com/products/realtime-database), [InfluxDB](https://www.influxdata.com/), [Microsoft Access](https://www.microsoft.com/en-us/microsoft-365/access), [Microsoft SQL Server](https://www.microsoft.com/en-us/sql-server), [MySQL](https://www.mysql.com/), [Neo4j](https://neo4j.com/), [PostgreSQL](https://www.postgresql.org/), [SQLite](https://www.sqlite.org/)

**Development and Collaboration Tools:** [Azure DevOps](https://azure.microsoft.com/en-us/products/devops) *(formerly Visual Studio Team Services (VSTS))*, [Confluence](https://www.atlassian.com/software/confluence), [Jira](https://www.atlassian.com/software/jira), [Mural](https://www.mural.co/)

**DevOps Tools:** [cdk8s](https://cdk8s.io/), [Coroot](https://coroot.com/), [Docker](https://www.docker.com/), [GitLab CI/CD Pipelines](https://docs.gitlab.com/ci/pipelines/), [Kubernetes](https://kubernetes.io/), [nodemon](https://www.npmjs.com/package/nodemon), [pm2](https://www.npmjs.com/package/pm2), [Swarm](https://docs.docker.com/engine/swarm/), [Tilt](https://tilt.dev/)

**Environments:** [Agile](https://en.wikipedia.org/wiki/Agile_software_development) ([Scrum](https://en.wikipedia.org/wiki/Scrum_(software_development)), [Kanban](https://en.wikipedia.org/wiki/Kanban_(development))), [Earned Value Management (EVM)](https://en.wikipedia.org/wiki/Earned_value_management), [Waterfall](https://en.wikipedia.org/wiki/Waterfall_model)

**Frameworks:** [.NET](https://dotnet.microsoft.com/en-us/learn/dotnet/what-is-dotnet), ASP.NET ([Core](https://dotnet.microsoft.com/en-us/apps/aspnet), [MVC](https://learn.microsoft.com/en-us/aspnet/mvc/overview/getting-started/introduction/getting-started)), [Entity Framework](https://learn.microsoft.com/en-us/ef/), [JavaFX](https://openjfx.io/), [Swing](https://docs.oracle.com/javase/tutorial/uiswing/), [Windows Presentation Foundation (WPF)](https://learn.microsoft.com/en-us/dotnet/desktop/wpf/overview/)

**Front-End Technologies:** [Bootstrap](https://getbootstrap.com/), [CSS](https://www.w3schools.com/css/), [HTML](https://www.w3schools.com/html/), [jQuery](https://jquery.com/), [React](https://react.dev/)

**Graphics and Visualization:** [CesiumJS](https://cesium.com/platform/cesiumjs/), [D3](https://d3js.org/), [DataTables](https://datatables.net/), [NASA WorldWind](https://worldwind.arc.nasa.gov/), [Telerik](https://www.telerik.com/), [Vuforia](https://developer.vuforia.com/home)

**IDEs:** [Eclipse](https://eclipseide.org/), [SQL Server Management Studio (SSMS)](https://learn.microsoft.com/en-us/ssms/sql-server-management-studio-ssms), [Unity](https://unity.com/products/unity-engine), [Visual Studio](https://visualstudio.microsoft.com/#vs-section), [Visual Studio Code](https://code.visualstudio.com/)

**Languages:** [Bash](https://www.gnu.org/software/bash/), [C#](https://learn.microsoft.com/en-us/dotnet/csharp/), [Cypher](https://neo4j.com/docs/cypher-manual/current/introduction/), [FORTRAN](https://fortran-lang.org/), [Java](https://www.java.com/en/), [JavaScript](https://www.w3schools.com/js/), [JSON](https://www.w3schools.com/js/js_json_intro.asp), [Markdown](https://www.markdownguide.org/), [MATLAB](https://www.mathworks.com/products/matlab.html), [SQL](https://www.w3schools.com/sql/) (inc. [T-SQL](https://learn.microsoft.com/en-us/sql/t-sql/language-reference?view=sql-server-ver16)), [TypeScript](https://www.typescriptlang.org/), [XML](https://www.w3schools.com/xml/), [YAML](https://yaml.org/)

**Microservices and Architecture:** [gRPC](https://grpc.io/), [Microservice Architecture](https://microservices.io/), [Nx](https://nx.dev/) (Monorepos), [RabbitMQ](https://www.rabbitmq.com/), [REST](https://www.redhat.com/en/topics/api/what-is-a-rest-api)

**Operating Systems:** Linux ([CentOS](https://www.centos.org/), [Proxmox Virtual Environment](https://www.proxmox.com/en/products/proxmox-virtual-environment/overview), [Red Hat](https://www.redhat.com/en), Ubuntu ([Desktop](https://ubuntu.com/desktop), [Multipass](https://canonical.com/multipass), [Server](https://ubuntu.com/server)), [Unraid](https://unraid.net/)), [Windows](https://www.microsoft.com/en-us/windows)

**Others:** [IIS](https://learn.microsoft.com/en-us/iis/), [Mathematica](https://www.wolfram.com/mathematica/), [Microsoft 365](https://www.microsoft.com/en-us/microsoft-365), [Microsoft Visio](https://www.microsoft.com/en-us/microsoft-365/visio/flowchart-software/), [Swagger](https://swagger.io/)

**Paradigms:** [Model-View-Controller (MVC)](https://en.wikipedia.org/wiki/model–view–controller), [Model-View-View-Model (MVVM)](https://en.wikipedia.org/wiki/model–view–viewmodel), [Object Oriented Programming (OOP)](https://en.wikipedia.org/wiki/object-oriented_programming), [Test Driven Development (TDD)](https://en.wikipedia.org/wiki/test-driven_development)

**Protocols and Data Serialization:** Google ([FlatBuffers](https://flatbuffers.dev/), [Protocol Buffers](https://protobuf.dev/))

**Scans:** [ClamAV](https://www.clamav.net/), [Gemnasium](https://gitlab.com/gitlab-org/security-products/analyzers/gemnasium#gemnasium-analyzer), [SonarQube](https://www.sonarsource.com/products/sonarqube/), [Trivy](https://trivy.dev/latest/)

**Source Control Management:** [Git](https://git-scm.com/), [GitHub](https://github.com/), [GitLab](https://about.gitlab.com/), [SVN](https://subversion.apache.org/)

**Testing Tools:** [Ava](https://github.com/avajs/ava?tab=readme-ov-file), [Chai](https://www.chaijs.com/), [Jest](https://jestjs.io/), [JUnit](https://junit.org/junit5/), [Mocha](https://mochajs.org/), [Moq](https://github.com/devlooped/moq?tab=readme-ov-file#moq), [NCrunch](https://www.ncrunch.net/), [QuokkaJS](https://quokkajs.com/), [React Testing Library](https://testing-library.com/docs/react-testing-library/intro/), [WallabyJS](https://wallabyjs.com/), [xUnit](https://xunit.net/)