

## Experience

August 2019 to Present

**Director of Software Engineering / Lead Engineer**, Whitebox Technology, Baltimore, Maryland

- Lead day to day operations of entire Engineering Directorate including growing team from 5 engineers to 18 engineers.
- Designed and implemented entire Engineering department's communication and process and company culture of Software excellence.
- Mentored entire team and individual developers in communication, architecture, engineering best practices, and software quality.
- Served as Lead Engineer for Systems Team, responsible for implementing innovative systems to deliver faster, more efficiently, and at scale
- Served as Lead Experience Engineer fostering and implementing consistent cross product common solutions to better enhance the company brand and the end user experience.
- Designed and delivered technical solutions across the entire company on everything from visualizations to automated conveyance systems.

July 2018 to August 2019

**Founder**, The Awesome Engineering Company, Laurel, Maryland

- Started The Awesome Engineering Company to productize personally developed open source solutions.
- Developed open source products for NodeJS and modern browsers.

October 2013 to July 2018

**Distinguished Software Engineer & Chief Architect for CyberSecurity**, SAS Institute inc, Ellicott City, Maryland

(Converted from VSTI employee to parent SAS company in October 2013)

- Chief Architect for the SAS Cybersecurity product line overseeing technical vision from inception to release.
- Served as Engineering Lead for User Interface, Services (API), Persistence (ElasticSearch), and Enrichment teams structured around technical layers.
- Acted as Lead Researcher for new implementations and technology experiments advising senior management on feasibility and direction
- Designed and implemented backend and frontend technologies for the entire product from conception to delivery in multiple languages/frameworks.
- Planned and implemented project standards (Language Standards, Build System) and processes (Agile, Kanban, Semantic Versioning) for entire Engineering team to ensure an organized, highly functioning team.
- Advised on all aspects of the product including deployment, installation, operations, scaling, testing and documentation.

October 2008 to October 2013

**User Experience Technologist & Principal Software Engineer**, Vision Systems & Technology Inc., a SAS Company (VSTI), Ellicott City, Maryland

- Served as UI Team Lead and project Technical Expert actively participating in all aspects of leadership from management to architecture to mentoring.
- Design and implementation of complex, dynamic and robust user interfaces and complex visualization for customers using NodeJS, JavaScript, HTML, CSS, Groovy, Grails, Servlets, REST, Web Technology concepts.
- Regularly advised as a Full Stack Engineer on all facets of the technology stack from OS to Build/Configuration to Data services.
- Lead User Interface design and development across multiple projects.

November 2006 to October 2008

**User Experience Technologist**, DDK Technology Group, Chantilly, Virginia

- Designed and implemented cutting edge User Interfaces in support of federal government technology efforts leveraging HTML, CSS, JavaScript, Java Servlets, JSP, XML, and XSL in an Ajax Methodology.
  - Served as mentor in Web Technology Concepts, Ajax Methodologies, JavaScript, and Cross browser integration efforts.
  - Provided expertise and advice to multiple projects and teams throughout development life cycle to encourage Usability and User-Forward design.
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November 2005 to  
November 2006

(Converted from Matrixx  
Group contractor to  
Mcdonald Bradley  
permanent employee in  
March 2006)

October 2001 to  
October 2005

(Converted from Ajilon  
Consulting contractor to  
General Dynamics  
permanent employee in  
February 2003)

**Software Engineer IV**, Mcdonald Bradley, Herndon, Virginia

**Software Engineer IV**, Matrixx Group, Herndon, Virginia

- Designed and implemented cutting edge User Interfaces with focus on Visualization and Human Computer Interaction.
- Development of User Interface applications using Java Swing, Google Web Toolkit (GWT), Java Servlets, HTML, JavaScript, CSS, XML and XSLT.

**Principal Software Engineer**, General Dynamics, Arlington, Virginia

**Software Engineer II**, *Ajilon Consulting*, Rockville, Fairfax & Arlington, Virginia

- Performed as the primary User Interface expert employing advanced Java Technologies to architect and develop critical research applications.
- Acted as lead Java Technology Expert, mentoring other team members on Java best practices and Java related technologies.
- Championed professional design methods across all development projects.

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November 1999 to  
October 2001

**Senior Product Engineer**, *Starbase Corporation*,

Alexandria, Virginia.

- Served as primary User Interface Architect implementing several core technologies using Java, Java Swing, AWT, XML, RMI and Java Servlets.
- Championed major usability changes across the entire product line including look and feel, localization, accessibility, and performance.
- Lead product wide Configuration Management and Deployment solutions.

March 1999 to  
November 1999

**Build & Release Engineer**, *Concept Five Technologies*, Burlington,  
Massachusetts.

- Developed technology for the installation and implementation Java, Ant, Perl, JavaScript, and shell scripting.

September 1993 to  
March 1999

**Computer Services Coordinator/Developer**, *Northeastern University School of Law*, Boston, Massachusetts.

September 1985 to  
June 1987

**Computer Programmer & Audio/Visual Technician**, *Masconomet Regional*,  
Boxford, Massachusetts. Programming work in Pascal, Cobol and VAX Basic.

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## Computer Skills

Web Technology	Full Stack Engineering (OS to Client), Ajax Methodology, Web Technology concepts, Browser Normalization, JavaScript, HTML, CSS, TypeScript, Ember Angular, PrototypeJS, Scriptaculous, YUI (Yahoo Libraries), ExtJS, Scriptaculous, Adobe Flex, JSON, XML, XSLT, HTTP, Google Web Toolkit (GWT)
JavaScript Technology	NodeJS (since v0.4.x), JavaScript, ECMAScript 2015 to present including ES6, NPM, Express, Fastify, Pino, Winston, Clustering, Child Processes, Worker Threads, ES Classes, Proxy, Reflect, async/await, ES Modules
Java Technology	Java, Groovy, Java Swing, Abstract Windowing Toolkit (AWT), Java 2D, Grails, XML DCD, XML Schema, XSLT, Java Servlets, JSP, JDBC, Java Messaging Service (JMS), RMI, Sockets, Multi-threading, Java WebStart
Cloud Technology	Amazon Lambda, S3, SQS; Google Cloud Functions, PubSub, Compute Engine; Serverless framework.
Other Programming	C#, SQL, Perl, Access, Pascal, C, C++, CORBA, BASIC, FORTRAN, COBOL, 80x86/68000/RISC Assembly, Unix Shell Scripting, DOS/NT Scripting
Data Storage	ElasticSearch, Logstash, Redis, MySQL, Oracle, Microsoft Access, SQL, ODBC
Development Tools	VSCode, Atom, SublimeText, Symantec Visual Café, Borland JBuilder Enterprise, Eclipse IDE, Microsoft Visual Studio, Platinum Technologies Harvest, Microsoft Visual SourceSafe, Microsoft InstallShield, Git, Merant PVCS, CVS, WinCvs, Subversion, Zerog InstallAnywhere, Borland StarTeam, Perforce, Subversion
Theoretical & Strategic	Web Technology Concepts, Ajax Methodology, Object Oriented Design, Compiler Design, Network Planning, Infrastructure & Strategy, Operating System Design
Operating Systems	Microsoft Windows (10, 7, Vista, XP, 2000, NT, 9x, ME, 3.x); UNIX/Linux (RedHat, Centos, Mint, etc), VAX/VMS, Apple Macintosh OS (pre OS X), Cygwin
Networking	TCP/IP, Microsoft Windows Networking, Banyan VINES, IPX, Ethernet
Hardware	PC Compatible, Macintosh, Switches, Routers, Bridges, Cabling
Applications	Apache Web Server, Tomcat, SOLR, ANT, James; Microsoft Internet Information Server, Access, FrontPage, Outlook, Explorer, Excel, Word, Visio; DBase; Lotus Notes, Ami Pro; Canvas; Photoshop, Photostyler; Macromedia Director, Fireworks; Cuacho Resin; Netscape Navigator, Mozilla Firefox

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## Education

September 1993 to June 1996	<b>Northeastern University.</b> Boston, Massachusetts. Candidate for Bachelor of Science Degree in English Literature with minors in Computer Science and Education. GPA 3.40 / 4.00
September 2003 to January 2008	<b>George Mason University.</b> Fairfax, Virginia. Candidate for Bachelor of Individualized Studies in Human Computer Interaction. GPA 3.73 / 4.00

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## Community

- Standards
  - **Initiated the FocusTraversal API proposal** – currently being incubated by the W3C for inclusion in the W3C HTML Standard.  
<https://github.com/awesomeeng/FocusTraversalAPI>
- Open Source
  - **ZephJS** – Framework for authoring Web Components  
<https://github.com/awesomeeng/zephjs>
  - **AwesomeLog, AwesomeConfig, AwesomeSever** – NodeJS server libraries.  
<https://github.com/awesomeeng>
  - **npmbox** – CLI Utility for packaging NPM packages for offline deployment  
<https://github.com/arei/npmbox>
  - node-untappd, functionary, threadful, licenses-extractor  
<https://github.com/arei>
- Speaker
  - **Advancing Focus**  
JSConf US 2019  
<https://github.com/arei/talks/blob/master/AdvancingFocus/details.md>
  - **The Morality of Code**  
NodeInteractive North America (November 2016)  
<https://github.com/arei/talks/blob/master/MoralityOfCode/details.md>
  - **We Are Hacks and Have Been Stealing Code for Years**  
JSConf Last Call (December 2015)  
with Todd Gandee  
<https://github.com/arei/talks/blob/master/CreativeBorrowing/details.md>
  - **Writing Code for Other People**  
CharmCityJS
  - **Introducing ZephJS**  
CharmCityJS  
<https://github.com/arei/talks/blob/master/IntroZephJS/details.md>
  - **Building Awesome - Introducing AwesomeServer, AwesomeConfig, AwesomeLog**  
CharmCityJS  
<https://github.com/arei/talks/blob/master/BuildingAwesome/details.md>
  - **Why are you Awaiting to use Async?**  
CharmCityJS  
<https://github.com/arei/talks/blob/master/AwaitingAsync/details.md>
- Outreach
  - **Node Web Server Frameworks Working Group (2020 to Present)**  
<https://github.com/nodejs/web-server-frameworks>
  - **CharmCityJS Organizer (2019 to Present)**  
<https://charmcityjs.org>
  - **NodeSchool Baltimore Organizer (2015 to 2017)**  
<https://nodeschool.io/baltimore>

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## Certifications and Memberships

- Certified ScrumMaster
- Member: Association for Computing Machinery – Human Computer Interaction

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## Design Examples

Source code available on GitHub at <https://github.com/arei> and <https://github.com/awesomeeng>.

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## References

Available upon request.

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