

# Matthew James Vandergrift

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<https://vandy.io>

## Summary

Lead Technical Architect - Former IBMer - Inventor - MCTS doing SDD, BDD & TDD alongside and industry leading agile best practices to produce SOLID software.

Containerization

DevSecOps

TSS Tech Talks

Technology Landscaping

Ephemeral Workloads - Green Code

TDD & BDD

Agile Coach

### Experience:

- I have been developing micro-services & API, mobile, client-server &/or desktop applications professionally for over 20 years. I wrote my first application in LOGO at a young age and have been enjoying development ever since. I enjoy mentoring and actively steward team members from all walks, through Agile processes and methodologies tools and increase technical understanding, to use processes that produce scalable, manageable and dependable systems with a focus on quality.
- My software engineering includes REACT, Docker, Open Shift, Kubernetes, IBM Cloud, Azure, AWS, Google/ Yahoo API's,
- I am an avid Javascript & .NET guy, C#, C++, VB.NET, Java languages with REACT, Angular, JQuery, Python, WebApi 2, OAuth2, EF, HTML5, Angular2-Angular4 & Cli, Bootstrap-Bootstrap4, node, XML, XAML, SAML, AJAX, CSS-CSS3. MVC, MVP, MVVM patterns.
- Travis/Jenkins/VSO/VSTS/TFS & Git: CI/CD - Build and Deploy, Checkin policies & branching strategies, WorkItem creation & Process Definitions, Build Configurations & Definitions, Config Transforms.
- RDBMS SQL including Entity Framework CF and DF.
- Cosmos/Cloudant/Couch NoSQL & MongoDB experience and understanding pros/cons.
- Expert with Cloud offerings including, queues, message hubs, AI, CronJobs, WebJobs, WebApps, NewRelic, SendGrid, Application Insights, Blob Storage, Queues, Databases, other SaaS built on IBM Cloud and Azure, AWS, GCS in docker or containerd running in kubernetes or Open Shift.
- Proficient in SDD, BDD & TDD Development using PACT, Jest, Enzyme, Cypress, Husky, Lint, Prettier as well as MSTest, NUnit, Selenium Coded Tests.
- Worked across Medical, Financial, Petroleum, Agricultural, Retail & Gaming Industries, as well as entrepreneurial in home automation and API's.
- Cross-platform development including UWP, Xamarin and Unreal Engine 4
- Primary Maintainer of an IBM inner source ticketing tool and mentoring its architectural patterns across my domain. Monthly showcases I present topics ranging from community discussions, brown bag / lunch and learns to full blow deep dives into architectural diagrams and how that translates to the patterns in code.
- Finalist of 16 teams who Presented at the 2020 IBM AI Hackathon for an AI Automated signal processing and problem solving using aggregated data solution.

## Experience



## **Lead Technology Architect**

Ferguson Enterprises

Jul 2022 - Present (5 months +)

DevSecOps

TSS Tech Talks

Project Landscaping

Ephemeral Workloads - Green Code

TDD & BDD

Agile Coach



## **Technology Architect III**

Ferguson Enterprises

Mar 2022 - Jul 2022 (5 months)



## **Open Source Maintainer**

IBM

Jan 2022 - Mar 2022 (3 months)



## **Technical Team Lead**

IBM

Jan 2020 - Dec 2021 (2 years)

Maintainer and Team lead for Open Source ticketing tool. Creator of data driven workflow engine that integrates with ServiceNow, PagerDuty, Minio, Slack, Jira, Cloudant, COS, S3, RabbitMQ, GitHub and more. IBM AI Hackathon 2020 Finalist

Code Mentor, Agile Champion, Team Morale Booster, Stretch Assignment Concierge.



## **Cloud Ops Engineer**

IBM

Dec 2019 - Mar 2020 (4 months)

As a member of the SE&TS Cloud Operations Team I have a great amount of hands on usage with technologies listed below from both the development and administrative perspectives. Soon the migration to OpenShift coupled with externalized DevSecOps testing & automation, IBMers can fork and contribute to an internal Open Source mono-repo, initiative to utilize a premier & prescribed operationally and technically excellent ticketing system to supply Operations & Support teams with world class efficiencies and scale to the edge in support of clients.

Active Maintainer for an internal IBM Open Source Node development utilizing: Docker, Kubernetes, OpenShift, Helm, GitHub, React, JavaScript, TypeScript, Inversify, Lint, Express, Next, Babel, CouchDB, NoSQL, NewRelic, SendGrid, Slack, Jira, Travis, Python, Lint, Gherkin, Cucumber, Jest, Enzyme, Cloud Functions, Watson AI, VSCode, UCD and more...

Behavior Driven Development - BDD

Test Driven Development - TDD

Inversion of Control - IOC

Brilliant Practices - Agile

## **Full Stack Software Engineer**

### IBM

Oct 2018 - Jan 2020 (1 year 4 months)

- Agile software & cloud engineer, with experience in SDD, TDD and BDD. I personally own and drive initiatives around quality and have presented for IBM and contribute to the industry in regards Automated Testing, Deep Work & “New Collar” initiatives.
- Coding and automated testing in VS Code/Studio, IntelliJ, Eclipse and XCode using React, Angular, Java, JavaScript, NodeJS, Swift, Redux, Cucumber, Gherkin, Jest, Jasmin and Mocha
- Expert in Cloud based offerings of the big 4.
- As a full stack software dev, and software/systems architect I am responsible for development practices, patterns and procedures for developing, maintaining, testing, solutioning and quality across many functional areas.
- Created Deep Work initiative as it applies to SDLC using Luxafor and Slack prototype to drive deep concentration and improve the workplace distractions allowing team members to be more productive. Limiting shallow work in the morning time allows us to produce more deep work throughout the day
- Managed and coordinated deployments on IBM Cloud PaaS & SaaS, using CI, CD tools Travis and conveyor. Experience with GitLab and Jenkins CI/CD pipelines
- Proficient in Docker and “Dockerizing Apps” into containers and hosting in clusters like Kubernetes and migrating apps to k8s.
- Created automated build and deployment processes that run unit tests using Jest, as well as Cucumber based on Gherkin stories.
- Cross-functional training and presentations with Sales and Marketing channels, Quality Assurance, and Business Operations.
- Drive and align integration strategies with various groups.
- Served as a technical ally and steward technical guilds by organizing and communicating across technical and non-technical personnel at all levels of the organization to support new tech.
- Adapted quickly and efficiently to changes in priorities and coordinate with the developers as needed utilizing SCRUM, Kanban and all flavors of implementing Agile or Waterfall.



## **Integration & Custom Software Guru**

### Epic Games

Feb 2018 - Sep 2018 (8 months)

Create custom software & dev ops utilizing API's and Services to further integration by connecting disparate systems, perform transforms from one protocol to another, one system to another, or from one format to another.

Integrated dozens of systems into Workday, including HR, Benefits, Payroll, Financing, Time and Attendance, Recruiting, Employee Photos, and other disparate data sources getting everything collected, parsed and integrated into the various Workday formats.

Able to self-drive project to completion through hard work, proficiency with computer systems, software's, processes and methodologies to aid requirements and deliveries.

Friendly, fun and focused work to aid the burden and stresses of tight timelines. Will crunch when need be, working nights and weekends when duty calls.

Active listening and OneNote taking allow for me to perform scribe duties and follow-ups over emails concisely and effectively, helping keep projects on schedule by determining actions.

Programmer, Design, Writing, Art & Sound – ‘PuzzleR’ – C++ & UE 4 Blueprints 3rd person science fiction problem-solving escape room game.

<https://youtu.be/2R4TGVAVe4s> <https://youtu.be/7L245Dil6Hc> <https://youtu.be/uQ1X7S46wyA>

You the player are sent by Earth to retrieve research from a space station Scientist after communications with the space station has been lost. This research may be the cure to Earth's fuel and food shortage. Time is of the essence. When you arrive, you are presented with a series of public domain puzzles that should be familiar to most folks but are presented in a way that the player must figure out what and how to play. You must solve the Scientists tests to prove your humanity and that you are worthy of receiving this life-saving research.



## **Software Architect**

### **YPrime**

Mar 2017 - Feb 2018 (1 year)

Drive the overall architecture with hands-on leadership in ideation, architecture, and implementation design and development.

As the architect, I was responsible for overall methodology, maintaining the solutions performance, scalability, regression testing capabilities with quality and security across all products.

Coded integrations using .NET, Microsoft Azure, Angular, Bootstrap, WebApi, OData, OAuth2 along other PAAS and SAAS systems.

Managed and coordinated deployments on Microsoft Azure platform, using CI, CD.

With Visual Studio Team Systems created automated build and deployment processes after unit tests of over 80% code coverage pass the gated check-in.

Assist with troubleshooting of the integration platform and debugging where needed.

Cross-functional training and presentations with Marketing, Quality Assurance and Operations.

Design and development marketing materials with graphics helping illustrate the concepts for the new product.

Wrote and compiled blog topics for the corporate website.

Drive and aligned integration strategies with all other product lines.

Served as technical evangelist in communicating across technical and non-technical personnel at all levels.

Communicated successfully, the various concepts and guidelines to the integration development team

Oversaw progress of development team to ensure consistency with initial design

Adapted quickly and efficiently to changes in priorities and coordinate with the developers as needed.

Hands-on development of proof of concepts, and evaluate new technologies.

Mentor, not dictate, with the various technical implementation teams for the other products

Approve final data concierge and future integrations before launch



## **Senior Software Engineer - Lead**

### **YPrime**

Nov 2015 - Mar 2017 (1 year 5 months)

Maintain and Extend clinical IRT systems, data transfer and database systems to support Bio Life Science companies and the Clinicians, Scientists and other Support Systems of Pharmaceutical system trial and testing.

Using .NET I developed and extended Web Applications and systems that support IRT systems.

Upgraded the Base System source from using sql backups to EF Code First Models in source.

Created prototypes and pitched the benefits of the code first model for database design.

Created presentations and mentored groups for Unit testing benefits and how implementing decent Code Coverage can improve the product and shorten the feedback loop in development.

Created prototypes for cloud based containers that could more effectively process data then console programs running on local in house servers.

Created scaffolding and tools for the purpose of extending our products into the cloud.

Stewarded the transition to Azure cloud based infrastructure and architectures.



## **Senior Web Application Developer**

Acumen Physician Solutions, LLC

Feb 2014 - Oct 2015 (1 year 9 months)

Main contributor and Team coordinator tasked with creating REST Services and also an overarching coding standard as it applies to the company in terms of Microsoft development, web services, WebApi, REST and Security. I have organized Architectural Standards two years in a row writing over 100 pages spanning 4 Standards documents. From naming convention, coding styling, in addition to direction, patterns and focus on creating Standards based Service Oriented Architectures using the M.S. WebApi 2 framework; and how Standards based Logging, Exception Handling, Authentication & Authorization can allow for sustained and manageable growth as a Medical software & hardware solutions company. I encourage higher levels of cross-functional development, and usher in a homogeneously growing product line that can be consumed or used across several media delivery platforms as a Software as a Service.

Following the completing of the coding standards and between project work. I created a proof of concept, working prototype then lead development of our Security Services. It allows consumers of our internal resources to benefit from an improved security model offered by a two legged authentication standard implemented in combination with E.O.I standards and delivered using a WebApi 2.0 framework.

Using modern patterns, practices and development tools & methodologies I create homogeneously growing, cross functional middleware software as a service that is scalable, forward and backward compatible and has millisecond response times in combination with two legged authentication.

I am now currently serving as Senior Web Application Developer on the Mobile Development Team and am responsible for the Security Model Service, Common Services for Mobile & as well as Common Services for the EHR platform.

Investors Title

## **Production Engineer**

Investors Title Company and Affiliates

Feb 2013 - Jan 2014 (1 year)

Mainly support of Legacy Microsoft Development Projects and Methodologies

Implement new business requirements and compliance items into several outdated Legacy Microsoft Development Languages, Technologies and Software Methodologies.

Produce Audit Level Detail for back-end SQL Server systems for Monthly, Quarterly and Yearly Audits.

Write primarily in MS T-SQL, VB.NET for ASP.NET 4.0, HTML & JavaScript / CSS.

Primarily support a 7000+ line JavaScript file that is used for Rate calculations and Form actions in one of the companies biggest financial transaction producers.

Implemented Work Instruction Standards to have consistent documentation of repetitive support tasks.

Implemented SQL Helper Script Standards to aid Infrastructure with ad-hoc support tasks & maint.

Participate as a contributor and owner of tasks for the companies multi-year software upgrade initiative.

Updating hiring documentation to include SQL structure questions to improve screening of candidates in particular for SQL language knowledge and troubleshooting.

Participated in 1st call evaluation of candidates, holding phone reviews and notations for mgmt.

Participated in Database Standard Review Process as well as Upgrade Project Planning meetings.

Demonstrated effectiveness in holding peer reviews as well as moderating individual SCRUM, status and planning meetings.

Organized Productivity Tools Presentations and implementations for Visual Studio and MS SQL Server.

Actively Participated in classroom activities for the "Software Project Survival Guide"

ISBN:1-57231-621-7

Coordinated the survey & results then organized a successful Cultural Activity referred to as the "Breakfast Day Club". One week a year a person brings in breakfast for the office and its rotating round robin schedule provides breakfast for everyone in the office on the 1st and Last Tuesday of every month.

## **Programmer / Analyst**

### **XSinc**

Jul 2011 - Feb 2013 (1 year 8 months)

Develop in a SCRUM team as well as SCRUM-BAN for over 6 months as an I.T. developer working closely with Product Owners, Business Analysts & Team Leads to create scalable reports and interfaces for an industry leader in Agricultural Data Aggregation. Using mainly Visual Studio for user interfaces, Visual Studio for SSIS, SSRS & SQL for CRUD & object/schema creation over several server environments and several database instances per server environment.

Supported the business and operations through efforts in managing large databases using custom handwritten SQL 2008 scripts and VB.NET console app processes to assist with the management of the growing data infrastructure & underlying reporting mechanisms.

Have worked on several cross functional teams at XS including new development work defined by operations & our clients (in scope user stories) as well as providing maintenance & support for the already burgeoning reporting platform.

As a knowledgeable member of the IT staff my experience has led to several time & effort saving measurements through either my custom C# OOP TFS time & task management application or through my proposals for improvements & enhancements to existing technology by way of the excel export standards improvements or the upgrade main VB.NET 4.0 GFP application used to process most of the bulk data received from clients in either XML, Flat File or FMT formatted.

Helped aid in the adoption of in-house coding standards for both SSMS & Visual Studio.

I created my own C# TFS applications for time tracking & task management and passed it on for others to benefit from the automation & metric gathering abilities of Team Foundation.

I have created standalone VB.NET console applications to parse & collate information based on defined structures to leverage .NET namespaces to facilitate tedious tasks & reduce dev time.

## **I.T. Developer**

### **XSinc**

Jul 2011 - Feb 2013 (1 year 8 months)

Happy as ever & living life to XS.



## **Programmer / Analyst**

Kangaroo Express, an operating trade name of The Pantry, Inc.

May 2008 - Aug 2011 (3 years 4 months)

1. Interacts with end users to maintain ongoing end user support. Writes application specifications, test plans, and other user documentation.
2. Designs, develops, trouble-shoots, debugs and implements software code for internal developments. Assesses risk and impact to the existing system that may arise due to user requirements or functional changes; derives and modifies procedures and interfaces to solve problems requiring integration of application and databases.
3. Performs functional testing to ensure the accuracy of code and effectiveness of user interfaces; follows company coding standards for all applications and source code maintenance; ensures that all documentation, including compliance related e.g. 404 (Sarbanes-Oxley), is completed in a timely manner.
4. Proactively provides ideas and solutions to improve the system by being a key technical contributor on projects; within the functional area, shows understanding of Retail industry, electronic data interchange, report design, and database design.
5. Understands business processes and knowledge of how systems and data are used in the enterprise to accomplish work and collaborate with others.
6. Takes specific, appropriate actions on a daily basis which lead to effective completion of assigned tasks and expected progress toward goals; provides effort estimates and prioritizes tasks.

## **Owner, Developer**

self

Jan 2007 - May 2008 (1 year 5 months)

Complete design, development and implementation of a Photo album maker that includes over 100 custom features from photo finding, collating, capturing of video, images/ scanned documents/ web url video/ web url images while keeping the UI design slim with snap-able windows, reflective buttons, color gradient header panels and over 50 custom photo filters to alter/ fix your photo or layer. The system has integrated photo printing as in professional studio as well as CD burning to allow this version some sharing functionality to share albums.

Database design on an Open Source SQL relational database (MySQL) with helper functions for setup, first time usage and restoration functions to clean restore a healthy database.

Main web site design and updated postings for feature additions, bug fixes or news on usage or upcoming releases. Designed and implemented a web portal tie in site for collaboration of users that features dashboard gadgets that are hosted by various sources as XML, RSS, REST and other Web 2.0 live services.

System testing, modeling, scaling and feature additions with a focus on completeness and reliability / usability.

Installation publications to allow users to subscribe to a version of the system as well as getting new updates when they become available with a single click.

Forum groups and BETA testing rollout with an additional pay-pal site for donations.

## **Lead Developer**

the late Pyi Htun M.D

Jan 2007 - May 2008 (1 year 5 months)



Complete design, development and implementation of an .NET 3.0 Online Institute that allows "Teachers" to upload course videos that they themselves create and teach "Student" who enroll and learn from a course oriented online classroom. "Smart-Client" design approach allows a user a seamless environment to interact with a teacher, but in a connected or disconnected state. The system communicates over the web using web services for data transmission. When changes are needed they simply connect and changes are received and/or posted. Administrators can also participate by login in and maintaining the institute from an administrator's point of view. Complete with all mechanisms for course creation, video upload, teacher/student/admin user creation, chat and messaging sub-systems. Web site tie-in which is built on ASP.NET that allows for online payments with pay-pal integrated with the same web services to have a central administrative point for available courses, students, teachers, administrators that is platform independent and accessible over the web. The system is in ALPHA and will be available to BETA within March 2008.

### **Developer, Support and Technical Consultant**

ARC Consulting Group, Inc

Feb 2006 - Feb 2008 (2 years 1 month)

Designed a conversion from a legacy Open Source dental system to a later more modern version. Designed a custom reports module & management system to give dental providers & admin statistics. Expanded the scalability of the system by implementing .NET publishing for automatic updates. Expanded the usability of the system and improved the user interface by making it friendly and functional.

### **Chief Solutions Provider, Training Supervisor and Technical Support**

Smart Data Systems, Inc

Jan 2001 - Jan 2006 (5 years 1 month)

Designed and developed a VB 6 completely paperless physician practice management system. Designed and maintained a MS SQL Server relational database consisting 100's of items. This system has integrated scheduling, check-in, nursing, physician, pharmaceutical, laboratory, billing and archival recording. The system has over 1000 features and is designed to run a doctor's office while being HIPAA compliant and 100% paperless. Integrated the Smart-card portable medical record (Smart-Record) into the practice management system. This included a patient Kiosk system and update mechanism. Integrated laboratory testing equipment, fax documents and EDI files with both systems. Implemented training material/courses for our recruits or users, managers & physicians. Designed and developed a completely paperless physician practice management system. Integrated the Smart-card portable medical record into the practice management system. Integrated laboratory testing equipment, fax documents and EDI files with both systems. Implemented training material/courses for our recruits or users, managers & physicians.

### **Developer and Webmaster**

Smart Data Systems, Inc.

Oct 2000 - Jan 2001 (4 months)

Increased scalability and usability of a Smart-card based portable patient medical record. Designed and implemented a Smart-card page file partition defragmenter for long term usage.



Developed modern interfaces with user assistance wizards for kiosk based systems.



### **EKG Monitor Tech / Secretary**

Cape Fear Valley Health

Aug 1999 - Oct 2000 (1 year 3 months)

Monitor patients EKG values and report findings to clinicians in an inpatient hospital environment. Enter hospital charges into the electronic system and provide feedback and operations support to patients through intercom.

## **Education**

### **Fayetteville Technical Community College**

Some College, Computer Programming

2001 - 2002

### **Lake Park High School**

High School Diploma, Computer Science

1995 - 1999

## **Licenses & Certifications**

### **MCTS: Microsoft .NET Framework 4, Windows Applications Development -**

Microsoft

070-515

### **Advanced .NET Framework Programming - Hands on Technology Transfer**

### **Mastery in Computer Fundamentals - BrainBench**

### **Computer Programmer & Analyst Aptitude - BrainBench**



### **MCTS: .NET Framework 4, Web Applications - Microsoft**

9255794



### **MCPS: Microsoft Certified Professional - Microsoft**



### **Enterprise Design Thinking Practitioner - IBM**



### **Cognitive Practitioner - IBM**



### **Security and Privacy by Design Foundations - IBM**

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## **Data Science Foundations - Level 1 - IBM**

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## **Skills**

Microsoft SQL Server • Visual Studio • ASP.NET • Database Design • Web Applications • Software Development • Programming • Web Development • Agile & Waterfall Methodologies • Software Documentation

## **Honors & Awards**

### **Spartan Super Race Finisher - Reebok Spartan Race**

Sep 2014

Participated in the course event to test my mettle: Course Description: "There is fire, mud, water, barbed wire, and occasionally Hell on Earth. There WILL be obstacles to catch you off guard. Curve balls, so to speak. Get over it."

### **Spartan Sprint Race Finisher - Reebok Spartan Race**

Mar 2014

Spartan Race is a series of obstacle races of varying distance and difficulty ranging from 3 miles to marathon distances.

### **Tough Mudder - Tough Mudder LLC**

Oct 2012

Tough Mudder events are hardcore 10-12 mile obstacle courses designed by British Special Forces to test your all around strength, stamina, mental grit, and camaraderie.

### **ALPHA B204 WebSummit Alumni - WebSummit**

Nov 2015

The topic of the conference is centered on internet technology and attendees range from Fortune 500 companies to smaller tech companies. This contains a mix of CEOs and founders of tech start ups together with a range of people from across the global technology industry, as well as related industries.