Shane Tollman Morris

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Focus: New Business Capture, AI/ML, Software Development

Current Clearance: Secret
Residence: Alexandria, VA
Willing to relocate: Yes
Willing to travel: 30%

1. Experience Summary

Imagine your most talented engineer was also a strategic solutions and business development leader. I am a senior level engineer for enterprise application development, AI/ML implementation, data management and governance, and architecture transformation. On top of those technical chops, my track record in client relations and strategic solutions makes me an ideal capture lead. When your enterprise requires bleeding edge solutions for new business capture, I have proven leadership and vision. This means crafting solutions for complex multi-cloud environments, legacy system support, and data lake transformation/ingestion. I have 17 years of experience in a diverse array of backgrounds from governments and "big tech," down to small businesses. I pride myself on being resourceful, and designing for end-users, human factors, and the importance of forward-looking compatibility.

2. Competencies

- Full-stack development (11 years)
- Front end development (16 years)
- Database development (12 years)
- API Development (3 years)
- Data science/Visual data implementation (6 years)
- Machine learning/artificial intelligence (6 years)
- Blockchain development (2 years)
- Data Governance (7 years)
- Engineering Management (9 years)
- Consulting (7 years)
- Business Intelligence Dashboards (7 years)
- Open Source Data Integration Tools (8 years)
- Data Connections (4 years)

3. Summary of Skills, Tools, and Technologies

JavaScript (10 years)
i. Angular
ii. React
iii. React Native
iv. Node.js
v. Vue.js
vi. jQuery
vii. D3.js
viii. Twilio/TwiML + Flex

Python (6 years)
i. Django
ii. Flask
iii. Pytorch
iv. Tensorflow
v. Gluon (MXNet)
vi. Sagemaker + Sagemaker Dash
vii. Saleor
viii. FastAPI
ix. Mage
x. Airflow

C/C#/C++ (2 years)
i. .NET
ii. Flutter

SQL + NoSQL (16 years)
i. MySQL
ii. SQL Server
iii. Mongo
iv. Cassandra
v. PostgreSQL

PHP + HTML + CSS + Static Sites (16 years)
i. Laravel
ii. Lumen
iii. HTML5
iv. CSS3
v. CakePHP
vi. Codeigniter
vii. Forestry
viii. Jekyll
ix. Gatsby
x. Wordpress

Containers + Servers
i. Ubuntu + CentOS
ii. Plesk
iii. Kubernetes (K8S + K3S)
iv. Docker
v. Caprover
vi. Botpress
vii. Rancher
viii. Portainer

AWS Cloud: *S3, Glacier, EC2, ECS, EKS, Glue, Athena, Lambda, Elastic Beanstalk, Sagemaker, Redshift RDS, Neptune, Aurora, Dynamo, Fargate, Batch, Lightsail, API Gateway, APC, EMR, Kinesis, Textract, and Kendra.*

Azure Cloud: *File Storage, Data Factory, Synapse, Functions, API Manager, and Container Manager*

4. Achievements

- Founded Internet Menace in January 2024. Over 2,000 students have signed up for the data engineering and data analytics course. The course is a "pay-optional" Python, SQL, Docker, Git and intro to engineering and analytics, with some computer science theory added for depth.

- Army MCTP/V3D lead architect for AI-enabled augmented reality simulations built in Unity. Led integration team for existing war simulation integration, creating SIPR export controls for AI-enhanced battlefield emulation.

- Data Architect and Strategist for US Navy N16 and MyNavyHR, overseeing data migration and application migration of 55 human resources applications within the enterprise into a data lakehouse architecture, powered by AWS Cloud and Databricks for a complete medallion system.

- Co-Lead for Army EODIMS, creating a customized graph database and ingestion service for document archives to be scanned, stored, and made searchable via custom search engine. Critical for the mission of explosive ordinance disposal across all DoD branches.

- DHS Cube task lead and architect. Ensured data lake architecture was sound for all human resources and logistics, in Azure cloud, switching pipelines from Informatica into Data Factory, along with creating a Delta Lake with Databricks.

- Architected Amazon Sagemaker Dashboards system for Victoria's Secret, using multivariate missing data to predict customer click through rates for existing customers, with the addition of predicting gift rates during "holiday buying" intervals.

- Worked with Ford Motor Credit and surplus lenders to predict income brackets based upon credit form ingestion data with automatic ETL pipeline for third party databases.

- Oversaw the transition of over 150 artist websites and applications from legacy Sony Music Entertainment on-prem architecture to AWS, transforming applications as needed, while maintaining backwards compatibility.

5. Experience Details

Booz Allen Hamilton | *Lead Engineer & Associate   09/2021– Present*

National Aeronautics and Space Administration – COCO Effort   2022-2024
- Led software development and business development for COCO initiative concerning climate change models, predictive modeling, integrations with external systems, and automatic ingestion of data from NOAA, NWS, DOE, NFS, and others.
- Developed partnership with NetApp and Nvidia for discreet hardware/software co-development strategy, for go-to-market success.
- Senior leader for all data engineering teams across all civil and DoD markets.

United States Navy – ES/N16 Chief Information Office   2022-2023
- Created strategy for IMS timelines and application interactions between learning stack, recruiting, and help desk applications.
- Architecture guide for re-factoring applications into cloud native, and optimized cloud-ready services.

- Recommended universal containerized architecture with FastAPI for modular API gallery for all Navy human resources and services.
- Recommended transferability of existing recruiting pipelines to be augmented by machine learning by re-architecting ELK stack into JSON-driven graph database with Sagemaker implemented psychographic targeting.
- Recommended improvements in cloud-native services which could potentially reduce cloud costs by 30%.

Department of Homeland Security - CUBE Personnel Management   2021-2022
- Managed task lead duties for overhaul of personnel, logistics, human resources, and asset management.
- Architect - transition phase for legacy OracleDB to datamesh infrastructure using Azure Cloud: CosmosDB, Data Factory, and Synapse.
- Created custom ETL pipelines for batch data via FTP and storage in Blob, with automating data tagging.
- Used Google's Looker platform for custom queries as a service to feed visualizations created in D3.js for geospatial information.
- Full documentation support for all services, along with ongoing documentation as required for added domains and client support.

United States Army - Explosive Ordnance Management (RAZOR)   2021-2022
- Oversaw team developing and engineering Angular front-end dashboard for Elastic-based search engine.
- Led development of Flutter application native for Android, access to search engine via API calls.
- Engineering lead for spillage and security tool using edge server cluster, loaded custom Python tool running OCR (Tesseract) onto Kubernetes K3S provisioned RPi4's, air-gapped all classified and unclassified materials into sorted folders.
- Developed Tesseract + SpaCey OCR tool for extracting text from archived Army explosive ordnance, loading text into Elastic, labeled and ETL'd into Postgres, ready for metadata assignment.
- On-site document scanning management and team management for 40+ language archival process, ingestion, and data governance.

Global Defense Group - Firefly Framework Development   2021-Present
- Co-developed Firefly, a Dockerized ETL/ELT middleware application.
- Implemented Plotly Dash into Firefly, so fast dashboards could be launched for Customs and Border Patrol, along with internal tools.
- Added FastAPI functionality for creating universal API connections to external applications.

CAPTURE ROLES

US Space Force Capture Team – IMT   2022-2024
- **[Contract Redacted] - $630M/7 YR**
- **[Contract Redacted] - $530M/5 YR**

US Army Capture Team – IMT   2022-2024
- Army MCTP/V3D - $800M+/8 YR (open)

NASA Capture Team – IMT   2022-2024
- **[Contract Redacted] - $600M+ IDIQ/6+ YR**

MSOC II - $600M+/5 YR (open)

Bee Morris Development LLC | *Founder   06/2016– 08/2021*

Sony Music Entertainment   2016- 2021
- Development of live listening and shared chat experiences with open source bot software. (BotPress, JS.)
- eCommerce click through prediction with AdWords API. (Sagemaker, using Music Machinery, custom matched song profiles and matched with YouTube API.)
- Development of eCommerce sites for Kygo and G-Eazy. (Headless WP, Atlas, Python + Django.)

Number One Health   2018-2021
- Five9 dialer auto-removal of spam numbers using Tensorflow to determine DID blocking potential. (Python Tensorflow, Redshift.)
- SMS follow-up for telephony with TCPA/FDCPA compliance. (Python, TwiML, Django.)
- Custom Twilio Flex telephony system for 120 users. (TwiML Python)

Rick's Ranchwear / JB Dillon Boots   2019-2020
- Fullstack eCommerce and ERP development for 13 retail locations and WooCommerce application. (WordPress Atlas Headless, Python, Django, Saleor.)
- Advertising programming with click through prediction using Tensorflow + Sagemaker + AdWordsAPI. (AdWords API, Python.)
- Videography production, photography, lightboxing, and all essential creative services, copywriting, etc. (Premiere, Photoshop.)

Western Bagel   2018- 2021
- eCommerce development on WooCommerce, integrations with Shipstation, SYSCO logistics, custom ERP with React/MySQL.
- Native application development (iOS/Android) delivery, order management.
- Wholesale application development for B2B services.

Ford Motor Credit   2016- 2021
- Click through prediction and psychographic profiles for customers - integrated with Hotjar and AdRoll. Used SQL export to Redshift for retrospective analysis with Firehose. Multiple landing environments for credit profiles.
- Potential customer recycler integration with custom CRM, automated offers using custom Tensorflow credit application sorting system.

Explore Minnesota / Visit Winona   2021
- Re-development of front end of Visit Winona, in atypical design. Custom eCommerce integration for merchandise.
- Micro-sites for farce tourism campaigns.

> Major Accomplishments: Creating click through prediction systems for targeting using Sagemaker/PyTorch. Various eCommerce developments under different frameworks. Full scope advertising agency with the addition of data analysis with multiple tools, creatives, and ideologies. Bee Morris Development LLC is an Atlas partner with WP Engine for headless architecture. BMD began Atlas as a Day 1 developer and beta tester for all Atlas services, allowing sites to be built with any front-end.

Sony Music Nashville | *Digital Developer   12/2013– 05/2016*

- Management of all Sony Music Nashville Digital Assets.
- Sony Music Nashville had over 150 legacy sites with different databases, frameworks, and hosting platforms. I created static and stable versions of every site, and hosted them on AWS long term. (JS, HTML, PHP, MySQL.)
- Development and deployment of global eCommerce sites: Kenny Chesney, Carrie Underwood, Miranda Lambert, Brad Paisley and 50+ others. Platforms included WordPress, Shopify, Joomla, Drupal, and static sites. (JS, HTML, PHP, MySQL.)
- CRM automation and sorting, using custom Zapier. Routed inbound emails and created non-PII profiles for each user. (Node.js)
- Ticketing and merchandise management using custom JS/PHP ERP for artists across RCA, Columbia and Arista. (JS/PHP)
    a. Mobile application development for iOS and Android - Kenny's Tailgate Tracker, various Garth Brooks projects. (Flutter, C#)
- Digital Marketing and Advertising
    a. Create all animated digital ads using HTML5, program all ads using SME proprietary system.
    b. Engineered custom audiences using AdRoll retargeting with custom SQL export for intent. (Early non-AI automation for flows with JS tools.)

> Supported 10+ RIAA Platinum records, 20+ RIAA Gold singles, 3 RIAA Platinum records. Managed the complete digital assets, websites, creatives, social media accounts, and digital marketing for every artist on the three most profitable labels in country music.

Beautiful Majestic Dolphin | *Founder   01/2013– 12/2013*

- Independent music industry digital development and consulting.
    a. Consulted with CAA, WME, and Madison House agencies on how to retain more ticket buyers as digital customers.
    b. Primary talent acquisition for Music in the Middle Festival, making recommendations for value based upon audience size versus guarantee. (Spotify, Soundcloud analytics, scanning for bot traffic, authenticity arrangement.)
    c. Custom ticketing software for small venues. (PHP, JS, MySQL.) Custom QR scanning software for venues.
- Custom VST consulting and development - Traktor.
    a. Six months designing user interface and experience for custom VST for audio production. Included integrating other common VST programs with "plugins" and adapters. (C# and custom RTA.)

Phoenix Communications | *Engineering Auditor   06/2012– 12/2012*

- Short term contract for AT&T communications affiliate. Created scanning tools with Python to "hot search" key terms.
    a. Used Bandit and Safety to find simple vulnerabilities in code before deploying to production. (Python Infosec)
    b. Created role-based access controls using Yosai. (Python Infosec)
    c. Implemented time based one time passwords and SMS one-time codes. (Python Infosec, Twilio SMS)
    d. Project required Secret clearance.

Earmilk.com | *Managing Partner - Digital Marketing + Engineering   09/2009– 05/2012*

- Custom streaming music server engineering. (S3 storage, MongoDB, simple JS player embed.)
    a. Supported 5M uniques per month with scalable streaming music architecture. At peak over 15TB per month in stable downloads. (React JS player fetching MP3's in S3.)
    b. Custom user playlists with Facebook oAuth login, saved profiles, integration with HypeM charts. (React)
- Ticketing and live events tracking, production, and management.
    a. Custom ticketing engine (JS/PHP) with custom SMS code entry (Twilio) for security.
    b. Ad targeting with geolocations on streaming server. (GA + DFP, automation with custom JS ad server running custom ads.)

Contract Worker | *Temporary Contracts 1099   06/2007– 05/2009*

- AT&T Mobility + Motorola
    a. Custom firmware creation for AT&T Mobility, adding ringtone stores, customizing regional settings. (JS)
- Cingular Wireless
    a. Custom firmware for Motorola RAZR. (JS)
    b. Patching updates with T9 keyboard. (JS)
    c. OTA process with Cingular servers. (JS)
- Verizon Wireless
    a. Motorola V-Series US firmware patches and quality control.
    b. Motorola Windows Phone development (JS) with UX/UI controls, custom interface for native Windows applications.

eUniverse/MySpace | *Engineer + Digital Advertising Development   12/2005– 05/2007*

- Started as intern, was promoted to engineer, then moved into digital development for Marketing at MySpace Music.

a. Coldfusion migration to C# running on ASP.NET - first round setup of SQL Server.
b. Technical team supporting SQL Server crash tickets.
c. Artist tools on MySpace Music player, promotion tools.
d. Page builds for MySpace Secret Shows and internal promotion tools.
e. User experience for Artists, upload manager overhaul team (2005).

5. Education

a. **Proud Dropout** - *I took a bunch of classes and decided I could code a lot better than my professors. So I quit.*

b. **Founder - Internet Menace -** internetmenace.com -- I have over 2,000 students who are taking my course on data analytics and data engineering.

Core competencies include Python, SQL, Docker, Git, and common libraries and tools used for data analytics and pipeline production