SHAMS SYED

MS (CS), **ME** (CS), **PhD** (CS)

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PROFESSIONAL EXPERIENCE: **10+ years** of **AI/ML** Implementation Experience, **20+ Years** of Software development in **C/C++** and management. **26+** major projects successfully completed in different contemporary languages & platforms. **10+ publications** and journal articles.
PATENT(s): Synthesizing a 3rd Dimension from 2D image. US Patent file no. 53723-03/62308630
WORKSHOPS: (True Color: Green) in True Colors of life Myers Briggs indicators
CERTIFICATIONS: MCP, MCSD Visual C++ Track

2022 to Current: AI/ML Consultant, Get Spiffy, Inc.

As AI/ML Consultant, Spear headed the research and development of the EasyTread Project, a cutting-edge AI/ML and computer vision-based technology to read tire tread. Capture tire tread wear patterns and predict tread life. The patent pending IOT device is cloud-connected, capturing 3D point-cloud and detailed tire surface cross-section depths. Closely working with the hardware engineering team on prototype devices running the algorithm.

- Research and Development of new technology to capture high-quality tire data.
- AI/ML-based Tread Depth reading algorithm using intel’s real sense depth cameras.
- Deep Neural Net-based tread wear prediction algorithm based on historical tire scans.
- Wrote highly optimized parallel real-time tread depth detection algorithm in C/C++.
- Experienced on IOT and embedded devices like Nvidia Jetsons supporting CUDA.

2019 to 2022: Chief of Technology Officer, ERS, Inc.

Developed Custom CRM Applications and Technology. Leveraging new in-house developed integrated CRM Applications.

- Technical Team building, mentoring, business strategy, and scaling roadmap vision.
- Research and Development of new technology for rapid-pace business growth.
- Provided guidance and established warm and friendly working culture for the team.
- Lead by example with hands-on coding & problem-solving skills eye for spotting talent.
- Single handed wrote complex data migrations from legacy system to new DB schema.
- Oversaw cloud-native secure Business application development and architecture design.
- Legacy business data transformation into cloud-native application on Azure Gov. cloud.
- Highly scalable, decentralized cloud native REST API based modular application design.
- Lead Mobile Biz. Apps development and integration initiative using Swift and Kotlin.
- Led the design of an SMS Texting Solution for bulk texting and marketing campaigns.

2018 to 2019: Chief of Data Science, ZVerse, Inc.

Implemented the cutting-edge state of art machine learning research and development. The original architect of ZVerse’s automated AI/ML-based B2B/B2C Layr® Platform. Wrote all ML Algorithms for the platform and core backend libraries for 3D Object synthesis (Generative AI) in C++.

My Selected ML Algorithms:

- Automated marketing keywords and designer's recommendation engine.
- Reinforcement Learning based price prediction Algorithm for additive manufacturing.
- Machine learning-based content Design Time Estimation Algorithm.
- Automated Tag extraction and design time estimation from images.
- ML-based Automated Quote quality qualification algorithm.
- Automated Similar Projects Algorithm based on similarity measure.
- Supervised Optimum Price Prediction Algorithm.
- 3D Object Synthesis from a single image Algorithm.
- Backend Libraries and native cloud-based components using C++/CUDA

2014 to 2018: CTO, ZVerse, Inc.

Served as Chief Technology Officer, ZVerse Inc. member of the executive leadership team, headed the core technology research and development, Layr® Platform Architect.

SELECTED PROJECTS:

- 3DIQ, an ML-based design time prediction component for the LAYR Platform.
- 3D Printable Terrain GIS application for LAYR Platform.
- Autonomous 2D to 3D Object Synthesis for LAYR. (Patent file. 53723-03/62308630)
- Mizzu Brick Replica Application for LAYR Platform
- Real-time Predictive cost estimation of 3D models for LAYR.
- LAYR Platform. (AMP C++, Angular, MVC, SQL Server, IIS, ASP.Net, C#)
- ZVCMS Content Management System for the 3D Printing industry. (Ajax, MVC, SQL Server, IIS, ASP.Net, C#)
- Cloud-based Restful API for Machine Learning Algorithms, 3D Model file format Conversion, Mesh Fixing, Mesh Stats, and Volume Computations.

2003 to 2010: CTO, COO, and Member BOD of ANILOGIX Inc.

Co-Founder and Responsible for Operations, Product development and cost estimation, Technical directions, Management of teams, and Heading Technology R&D.

SELECTED PROJECTS:

- Mobile Games and Applications (Symbian, Java, IOS)
- AN-Enterprise Resource Planning System. (RESTful API, SQL Server, IIS, ASP.Net, C#)
- AN-Human Resource Management System. (RESTful API, SQL Server, IIS, ASP.Net, C#)
- Real-Time Weather Simulator for terrain simulations. (Win32, DirectX, Visual C++)
- Real-Time 3D sound middleware Solution. (Win32, DirectX, Visual C++)
- Real-Time 3D Games Titles (Win32, DirectX, Visual C++)
- RT3D Terrain FX engine for Firearms Training Simulators (FATS), USA.
- 3D Sound Engine Middleware. (OpenAL, Win32, DirecSound, Ogg Vorbis, Visual C++)
- Digital Content Creation tools (3DS MAX API, Win 32, Visual C++)
- 3D Studio Max Plugins for Content Production (3DS MAX API, Win 32, Visual C++)

EXPERTISE:

Languages: C/C++, Python, C# Dot.Net, R, ASP.Net, Java, 32/64-bit x86 Assembly, SQL/PLSQL, Javascript.
Implementation Skills: AI/ML/ LLMs, Tensor Flow, PyTorch, Convolution Neural Nets, DNNs, LLMs, NLP, RESTful APIs, Swift, Kotlin, Windows API, Kafka, Azure, AWS S3, CUDA, HLSL, DirectX, WebGL, OpenGL, OpenCV and OpenAL, Intel TBB and STL.
Analytical Skills: Requirement Analysis, ERA, DFD, UML Object modeling
Debugging Skills: Intel Parallel Studio, Amplifier (VTUNE), Soft ICE, Visual Studio Debugger
Management Skills: Rational Unified Process (RUP), MSF, PERT / CPM, MS Project, Strong Communication and Problem solving, Agile Software Development.
Selected OS and Tools: Windows Server, Ubuntu, Mac OS, 3D Studio MAX, Photoshop, MS Visual Studio, Matlab, Maple, Intel Parallel Studio, GitHub, JIRA.

ACADEMIC QUALIFICATION:
2014-2023: PhD Computer Science, University of South Carolina, USA.
2010-2014: ME Software Engineering, CGPA 3.4 University of South Carolina, USA.