Javed Maqbool Shah

Chicago IL,

javedmshah.github.io

Education

2024*	Natural Language Processing Specialization, DeepLearning.AI
2024*	Deep Learning Specialization, DeepLearning.AI
2023	Multivariable Calculus and Linear Algebra for Data Science, **University of California, Berkeley**
2023	Machine Learning Specialization, DeepLearning.AI, **Stanford University**
2022	Decentralized Finance (audit), **University of California, Berkeley**
	Solidity for smart contracts, taught by Prof. Andrew Miller
2014	**MBA**, **Haas School of Business**, **University of California, Berkeley**
	GMAT: 740, Emphasis in Game Theory & Strategy
	Capstone - Designed eBay-like network game to increase sales throughput at Hewlett Packard
2012	Financial Modeling, Training The Street (workshop), University of California, Berkeley
2001	**BS Computer Engineering**, **University of Pune**
	Emphasis in Cryptography & Artificial Intelligence (Prolog, Lisp, Expert Systems)
	Final Project - Medical Diagnosis Expert System (Medi-Liza) in Common Lisp

Certifications and Workshops

2022	Crypto Economics Security Conference (CESC), University of California, Berkeley
2022	Zero Knowledge Proof (ZKP) Workshop, University of California, Berkeley
2017	Certified Information Security Manager Exam, ISACA
2016	Project Management Professional (PMP), Project Management Institute
2009	Certified Information Systems Security Professional(CISSP), (ISC)[2]
2008	Zachman Certified Enterprise Architect, Zachman Institute, Washington DC

Affiliations and Volunteering

2017	ISACA, Member of the Sacramento Chapter
2016-	Project Management Institute, Lifetime Member
2015-	Association for Computing Machinery (ACM), Member
2014	Haas Consulting Club, University of California, Berkeley
2013	Asian Business Club, Leadership Team, University of California, Berkeley
2012	Gallup Strengths-based Leadership Workshop, University of California, Berkeley
2012	Court Appointed Special Advocate (CASA) for Children, Contra Costa County, California
2006	Down Syndrome Connection of the Bay Area, Sponsoring Volunteer, Walnut Creek

Research and Teaching Interests

Intersection of user-facing cybersecurity and machine learning, decentralized identity and distributed ledgers. Humanitarian applications of artificial intelligence for children from conflict zones.

Technical Skills

Deployment Architecture
- Stateless token based architecture for authentication with OAuth2 RFC6749
- Global and fractional replication of data in the LDAPv2 specification
- Just In Time migration of on-premise software to cloud with shadow sessions

Data Science and Software Engineering
- Agile SCRUM expert, JIRA & GitOps workflows
- Groovy, Advanced Java, C/C++ and C#

- TensorFlow, Keras, Pandas, NumPy, Jupyter Notebooks, Python, STATA and R

Identity Management & Governance
- SSO, LDAP, Active Directory, Azure, Unix/Linux, SAML, OAuth 2.0, OpenID Connect

DevOps & Cloud
- Hands-on experience with Docker and Kubernetes in GKE and AKS

Consulting and Advisory
- UC Berkeley Haas School of Business internship program
  - Hewlett Packard Enterprise: Designed eBay-like network game to increase sales throughput

Awards and Recognition

2014   First Place in the UC Berkeley Haas Innovation Gamification contest at Hewlett Packard Enterprise
1997   Qualifier, Regional Math Olympiad, Pune, India
1996   Qualifier, Regional Math Olympiad, Pune, India
1995   Qualifier, Regional Math Olympiad, Pune, India

Manuscripts in Publication / Independent Research

"Emotion Agency in Politics"
- International Political Science Abstracts, (IPSA, February 2024)
- Journal Article with Shah, Dr. Tamanna, Assistant Professor of Instruction, Ohio University
- by Shah, Javed - contributing to model generation using NetworkX libraries in Python

The multi-layered process of emotions in the everyday is depicted through a network of interconnected nodes and relationships across four dominant societal themes: collective contestation, political participation, state legitimacy, state's use of media to project a national identity. I constructed a model that emphasized the dominant themes using a force-directed layout weighted by the effect sizes of each coded feature within these themes. An undirected weighted graph was created using nodes computed from each feature and theme and weighted by the effect size. A Kamada Kawai layout was used to plot the relationships between the dominant themes and features.

"Religious Hegemony and Political Regime: Examining the Inverted U Relationship with Conflict."
- Journal Article with Shah, Tamanna M., Assistant Professor of Instruction, Ohio University
- Submission for American Sociological Review (ASR), 2024

Mixed model analysis was used by related studies on social conflict and religious hegemony to provide generalized and flexible approaches to document the effects of regime on conflict. The logistic models created in this research confirms the robustness of the results. The fixed effects model demonstrates changes in the directionality and significance levels of some of the control variables. The inverted U-shape curve or the nonlinear effect confirms earlier findings and adds credence to theory of religious hegemony as being related to changing political institutions, and also as being causal in nature to conflict. We confirmed the relationship using a random effects model that showed a generalized average of the hypothesized relationship between conflict and religious hegemony with both within-entity and between-entity analyses.

"AI Intersections: Amplifying Children and Youth Voices in Conflict Zones"
"AI-Enhanced Resilience: Empowering Youth Voices in Conflict Zones"
- Book Chapters accepted for *Children and Youth as 'Sites of Resistance' in Armed Conflict*, Volume I (Sponsored by American Sociological Association (ASA) Section on Children and Youth, Emerald Publishers), May 2024

I focus on how Artificial Intelligence can be applied to amplify the voices and experiences of children and youth in conflict zones, shedding light on their diverse forms of resistance, agency, and resilience. These chapters explore Generative AI and Natural Language Processing (NLP) strategies that can help children and youth from armed conflict zones to manage their emotional and psychological responses. I propose AI-assisted solutions such as EmoExplorer, Goal Galaxy, Friendship Forge, Memory Quest, and Concentration Explorer for building a strong community of shared experiences expressed via art, stories, and video games. By leveraging AI and machine learning in these ways, I aim to amplify the voices of children and youth in conflict zones and also provide them with tools and platforms to express their agency, resilience, and unique forms of resistance.

Working Papers

"*Deescalating Psychological Distress and Behavior Challenges in Children and Young Adults with IDD*"
- Submitted abstract to The Maria Grzegorzewska University, Szczęśliwickiej, Poland, Warsaw (March 21-22, 2024)
- Conference submission with Shah, Tamanna M.

The paper explores combining different deescalation strategies to provide holistic support, fostering a more inclusive and supportive environment for young adults with IDD, emphasizing their social inclusion and overall development.

"*Delegated and Chained Authorization with OAuth2 and User Managed Access*"
- Adapted from proprietary technical note, 2018
- Submitted to Security of Information Networks SIN18, rejected with review comments

The paper explores "decentralized permissions" as a way to avoid caching pre-baked permission sets at the Authorization Server (AS). Ideas proposed include caching nested permissions to promote faster authorization decision times.

Speaker

2023   "Secure Passwordless- Yes you can!", Executive Speaking Session, Gartner IAM, **Dallas**, TX
2022   "Decentralized Identity and Security of User data", TechVision Experts Panel, **Seattle**
2021   "Identity Based Authentication for Third-Party Access", Saviynt Converge Keynote, **San Diego**
2019   "Securing Authorization microservices", Gartner Identity Talk, **Las Vegas**
2018   "Token Exchange Microservices", ForgeRock Identity Summit, **London**, UK
2017   "Declarative authorization policies in Kubernetes clusters with Open Policy Agent", **Berlin**, Germany
2017   "Introducing Identity Microservices", Ping Identity Summit, **Singapore**
2016   "Identity Impersonation, Risks and Mitigation", Identity Risk Management workshop, **Austin**, TX
2013   Enterprise Risk Assessment & Enablement, 3-day workshop, BCBS NC, **Charlotte**, NC

Technical Reports

Note: Company Intellectual Property

2023   **Identity Assurance**, *Dynamic identity assurance levels per NIST 800-63A IAL2 specification*, 1Kosmos
Dynamic identity assurance levels based on changing validity of strong pieces of identity evidence

2023   **Identity Risk Score**, *AAMVA Risk scores using Driver's License numbers*, 1Kosmos
Weighted risk scoring using probabilities for individual identity attributes received from AAMVA.

2022   **Identity Assurance**, *Verified Identity with user consent for secure passwordless: Day 0 to Day 2*
Kantara-certified consent receipts using wallet-cached proof-of-consent records.

2021   **Blockchain Identity**, *Decentralized Identity design and authentication using Smart Contracts*, 1Kosmos
Blockchain-agnostic Directed Acyclic Graph (DAG) architecture, data sharding using IPFS, atomic swap smart contracts for high scalability, and management of between-blockchain transactions.

2020   **Microservices Security Architecture**, *Emerging Identity paradigm and market analysis for SaaS trends*, ForgeRock
Analysis of declarative vs imperative policy design and implications.

2019   **Microservices Security Architecture**, *"Microservices innovation framework using OAuth 2.0 RFC8693*, ForgeRock,
Micro-gates based authorization architecture for use with clustered, mixer-authorized microservices.

2018   **Microservices Security Architecture,** *Delegated and Chained Authorization with OAuth 2.0*, ForgeRock
Introduced may_act claim decoration for use with OAuth 2.0 access tokens to imply least-privileged delegation.

2017   **Authorization Policies,** *XACML code generator for authorization policies: an implementation in Java*, ForgeRock

Proposed implementation framework for automatically generating XACML policies from metadata.

2016   **Risk Modeling,** *Monte Carlo methods for minimizing maximum drawdown in algorithmic trading*
Neural network and SVM classification algorithms for trading commodity futures products (Sharpe 1.33).

Public Media

2023   "Rainbow Table Attacks", LinkedIn
2023   "Adaptive Authentication", LinkedIn
2022   "Zero Trust: Best practices for implementation", LinkedIn
2022   "Behavioral biometrics authentication", LinkedIn
2022   "Synthetic identity and fraud", LinkedIn
2022   "The Identity Developer platform offered on a cloud-hosted Sandbox", 1Kosmos
2019   "Identity Workflow using Authentication Trees and Google Cloud Functions with Zeebe Cloud", ForgeRock
2018   "ForgeRock Identity Microservices with Consul on OpenShift", ForgeRock
2018   "Environment Runtime management identity microservices with Hashicorp Consul", ForgeRock
2018   "Token Exchange and Delegation using Identity Microservices", ForgeRock
2018   "Securing your (micro)services with ForgeRock Identity Microservices", ForgeRock
2016   "Client and server side scripting for authentication", ForgeRock
2016   "WS Federation support with simple modifications to a SAML Engine", ForgeRock
2015   "2FA predictive authentication using Phone-based risk signals", ForgeRock
2015   "Deploying social login risk profiles using social networking risk signals", ForgeRock
2015   "Impersonation techniques for Helpdesk management in modern access management products", ForgeRock
2013   "Strategy for Security: a pure bargaining model", theberkeleymba.org

Work Experience

Jan 2023 –   *Ohio University*
AI/ML Researcher for Computational Science
Using machine learning models to discover features that serve agency and discoverability for societal phenomenon.
Research is being published by Emerald Publishing and in International Political Science Abstracts.

July 2021 – Dec 2023   *1Kosmos Inc.*
Head of Product (SVP), Blockchain based Identity and Access Assurance Platform
Responsible for defining and executing the identity and access management vision and AI/AML roadmap for our
blockchain based Know Your Customer (KYC) SaaS platform. Designed and built developer.1kosmos.com.

Jan 2014 – July 2021   *ForgeRock*
Sr. Director of Product, Identity Cloud
Designed and built the global ForgeRock Identity Cloud service on kubernetes in Google Cloud. Led North America
pre-sales, responsible for $41M P&L. Established the *https://github.com/forgerock/forgeops* devops project.

Dec 2010 – Dec 2013   *Prolifics Inc.*
Director of Professional Services, Americas
Responsible for a shared $11M P&L with other directors, managed a professional services team of security consultants in
the US. Served as lead architect for identity and access management projects.

Aug 2008 – Nov 2010   *University of California, San Francisco*
Program Architect, Identity & Access Management for Campus, InCommon Federation
Designed and operationalized the UCSF myaccess.ucsf.edu portal that serves over 150,000 students and staff.

Aug 2004 – Dec 2008   *Kaiser Permanente (iRise)*
Architect, Identity & Access Management Services

Designed and built healthy.kaiserpermanente.org, a global service serving 500,000 users for Kaiser Permanente.

May 2001 – Aug 2004   *Persistent Systems, Inc.*
Senior Staff Software Engineer, Identity
Senior software developer on the IBM Tivoli Identity platform.