Javed Maqbool Shah

javedmshah.github.io

https://www.linkedin.com/in/javedmaqboolshah/

Education

2024	Generative AI with Large Language Models, 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
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-	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), Contra Costa County, California
2006	Down Syndrome Connection of the Bay Area, Sponsoring Volunteer, Walnut Creek

Research and Teaching Interests

Primary interests lie at the intersection of artificial intelligence, user-facing cybersecurity, and machine learning.
Interested in expanding my knowledge on decentralized identity and distributed ledgers.
Forthcoming publications focus on humanitarian applications of artificial intelligence, especially for children from conflict zones.

Technical Skills

Deployment Architecture
- High Availability regional and multi-region deployments in Google Cloud and AWS
- Stateless token based architecture for authentication with OAuth2 RFC6749
- Global and fractional replication of data in the LDAPv2 specification
- JIT 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
  - iHear Medical: Assisted with roadmap definition and go to market strategy for hearing aids

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 Preparation

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

Applies logit regression analysis in STATA and R to show that religious hegemony and political regime relate to conflict in a curvilinear inverted U-shape form.

"AI Intersections: Amplifying Children and Youth Voices in Conflict Zones"
"AI-Enhanced Resilience: Empowering Youth Voices in Conflict Zones"
- Book Chapter submission 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)

Used sklearn's NLP capabilities including the CountVectorizer, for feature extraction on a correspondence text corpus that gave us vectorized sentences with summed individual occurrences of an emotion in each sentence.

Working Papers

"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 the way to avoid caching pre-baked permission sets at the Authorization Server (AS).. The paper attempts to present an alternative framework to solve common API to API interactions involving heterogeneous services, each with its own security requirement.

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, San Diego

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*
C# and python neural network and SVM classification algorithms for trading commodity futures products with Monte Carlo simulations that achieved Sharpe ratios greater than 1.33.

Public Media

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

2013   "Strategy for Security: a pure bargaining model"

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.