

Saro Saravanan

Engineering leader with strong track record of applying technology and innovation to achieve winning business outcomes.

Westborough, MA 01581

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Entrepreneurial hands-on technology executive with extensive success in developing, delivering, selling, and operating digital products and services used by millions everyday in fintech, identity, biometrics, and Government systems. Lean-agile practitioner, change agent, and transformation leader who built and managed successful teams implementing CI/CD and Devops best practices on modern tech stacks. Strategic thinker with strong business acumen and a focus on the bottom-line. Excellent written and oral communicator. Holder of key web application and biometrics patents. Founder-CTO of \$100M financial services SaaS startup. Chief architect of TSA CAT and many Fidelity SaaS products including NetBenefits. Engineering Leader of TSA PreCheck. Book author. Lifelong learner.

Willing to relocate: Anywhere

Authorized to work in the US for any employer

Work Experience

Principal

Saro Saravanan and Associates - Westborough, MA
September 2018 to Present

Consulting in Software Development, Solution Delivery, Product Development, Platform Engineering, Cloud Deployment, Biometrics.

Vice President Technology & Innovation

IDEMIA (formerly MorphoTrust USA) - Billerica, MA
April 2013 to September 2018

- **Engineering** — Product owner and transformation leader who successfully re-engineered the company's core biometric credential issuance system introducing agile methodologies, continuous integration, Devops best practices, and a modern tech stack to dramatically lower delivery costs. Engineering leader of an award-winning agile development team implementing TSA PreCheck, the pre-eminent nationwide registered traveler program.
- **Product Management & Customer Success** — Program line director for \$200 M line of business. Leader for development of corporate, product, and technology strategy. Practitioner of lean startup tools such as business model and value proposition canvases to strengthen the product management function. Negotiator of cost-saving vendor contracts. Customer success catalyst for winning facial recognition software and hardware solutions for DHS, CBP, airlines, sea ports.
- **Solution Development & Selling** — Product architect and capture lead for TSA CAT, an \$85M identity verification program for 450 U.S. airports, that was openly competed for 6 years without a winner. Conceptualized and prototyped an innovative patent-pending solution within 6 months of joining the team. Winner of award for most innovative sales process. Author of influential white papers.

Engineering Consultant

MorphoTrust USA - Billerica, MA
June 2008 to April 2013

Responsible for all aspects of delivering drivers' license systems for several large states as well as the National ID and Passport system for Paraguay. Worked with state and national commissioners, government ministries, CIOs, CISOs, architects, developers, and systems and network administrators in a comprehensive role covering solution architecture and development, engineering, integration, deployment, training and program management. Turned around a \$45 M critical failing program and delivered earlier than customer's expectations. On-time delivery at 40% cost savings for \$10+ M programs.

Managing Director

Everbeam, Inc
December 2005 to June 2008

General Manager of software and product development consulting company providing on-shore, off-shore, project-based, and strategic services in the areas of product management, business and technology development, sales and marketing. Played the following roles for client companies:

- Interim CTO — tapdancelive.com Produced vivid simulations of Microsoft Word and Excel using JavaScript for online skills testing.
- Director of Product Strategy — AssureTec
- Lead Architect — Ipswitch

Founder-CTO

Mediabee - Westborough, MA
September 2002 to June 2006

Created a patent-pending cross-platform rich Internet/desktop application and related web properties used by thousands of users worldwide. Having bootstrapped the company from inception, oversaw all aspects of the business, including investor presentations, marketing and business development, product development, and technology architecture. Managed an offshore development team.

Founder-CTO

Emplanet - Westborough, MA
January 2000 to July 2002

Launched a highly-acclaimed J2EE Internet-based self-service 401(k) SaaS platform that Forrester said was "light years ahead of Fidelity and Vanguard". Raised \$30MM. Secured MetLife and PNC Bank as investors and customers. Built the following applications in record time with scant resources: Participant Station, Sponsor Station, Advisor Station, Admin Station, and Partner Station. Worked closely with the sales team, senior management, and senior executives of customers and prospective customers to close deals. Built up the entire technology infrastructure, comprising the following: a state-of-the-art data center to house our corporate and production servers, a web service delivery infrastructure with common components to deliver web, speech recognition-based VRU, wireless, single sign on, and business partner services, and a highly automated back office system for trading and reconciliation.

Consulting Chief Architect

Fidelity Investments
October 1995 to January 2000

As hands-on Chief Architect, launched the following key products: Fidelity NetBenefits (<http://netbenefits.fidelity.com>) with a total user community of over 10 million; Fidelity Plan Sponsor WebStation (<http://psw.fidelity.com>), a service for 30,000+ employers; Catalina, a highly available, highly scalable, and secure web application architecture and integration platform. Secured multiple patents in the area of web application servers and web tools. As strategic consultant, delivered the following products: Fidelity SLAMNet, Fidelity NCCMTnet, Fidelity Health & Other Benefits, Fidelity (Quicken) Financial Planner, Fidelity Portfolio Planner, Fidelity Pension Modeler, Fidelity Digital Library, Fidelity Pension Planner, PSW Reporting, PSW Internet Workbench, PSW Treasury, PSW Interchange, and a few others.

Principal Engineer

Digital Equipment Corp

September 1986 to September 1995

Co-authored authoritative reference book, "OpenVMS AXP Internals and Data Structures".

Developed the standalone backup environment for VMS. Ported VMS to Alpha, NetWare, and Windows NT. Taught crash dump analysis to field engineers worldwide to rave reviews.

Education

M.S. in Mechanical Engrg

State University of New York at Buffalo - Buffalo, NY

1983 to 1985

B.E (Hons) in Mechanical Engrg

National Institute of Technology

1978 to 1983

Skills

Architecture (10+ years), Rapid prototyping (10+ years), Lean-Agile Methodologies (10+ years), Product Development (10+ years), Product Management (10+ years), Devops (4 years), Solution Selling (5 years), Process Engineering (10+ years), Program Management (10+ years), Project Management (10+ years), Biometrics (10+ years), Identity Verification (10+ years), Skills Testing (10+ years), Financial Services (10+ years), State & Federal Government Contracting (10+ years), Operating Systems (10+ years), CI/CD (4 years), AWS (5 years), Team Building (10+ years), Team Development (10+ years), Vendor Management (10+ years), Mentoring (10+ years), Budgeting (10+ years), Product Strategy (10+ years), Portfolio Management (6 years), Requirements Gathering (10+ years), Requirements Management (10+ years), Business Model Canvas (3 years), Lean Product Canvas (3 years), Scrum (4 years), Kanban (5 years), Contract Negotiation (10+ years), Executive Management (10+ years), Domain Driven Design (10+ years)

Links

<https://saro-saravanan.github.io>

Patents

System and method to streamline identity verification at airports and beyond (#9501882)

<https://patents.google.com/patent/US9501882B2/en?q=9501882>

November 2016

Facial-recognition based identity verification using smartphones, avoiding the need to present physical credentials.

System and method for credential authentication (#9481197)

<https://patents.google.com/patent/US9481197B2/en?q=9481197>

November 2016

Novel methods to improve document authentication speed and accuracy and reduce the need for adjudication.

System and method for credential authentication (#10037460)

<https://patents.google.com/patent/US10037460B2/en?q=10037460>

July 2018

Novel methods to improve document authentication speed and accuracy and reduce the need for adjudication.

Distributing information using a computer (#6631424)

<https://patents.google.com/patent/US6631424B1/en?q=6631424>

October 2003

Application routing using URLs.

Managing an information retrieval problem (#6151686)

<https://patents.google.com/patent/US6151686A/en?q=6151686>

November 2000

Automated health checking of web applications.

Controlling access to information (#5991878)

<https://patents.google.com/patent/US5991878A/en?q=5991878>

November 1999

Single sign-on for web applications.

System and Method for Verifying Liveness (#20170118209)

<https://patents.google.com/patent/US20170118209A1/en?q=20170118209>

September 2018

A novel method for remotely verifying the presence of an identification presenter.

Publications

OpenVMS AXP Internals and Data Structures, Version 1.5

https://smile.amazon.com/OpenVMS-Internals-Data-Structures-Version/dp/155558120X/ref=sr_1_3?ie=UTF8&qid=1537630430&sr=8-3&keywords=openvms+internals&dpID=31xV649SdyL&preST=_BO1,204,203,200_QL40_&dpSrc=srch

January 1994

Perhaps the most up-to-date description available for a commercial operating system at the time, this book was an irreplaceable reference for operating system development engineers, operating system troubleshooting experts, systems programmers, consultants and customer support specialists.

VAX/VMS Internals and Data Structures Version 5.2

https://smile.amazon.com/VAX-Internals-Data-Structures-Version/dp/013929886X/ref=sr_1_5?ie=UTF8&qid=1537630572&sr=8-5&keywords=vax%2Fvms&dpID=5170iYp50pL&preST=_SX218_BO1,204,203,200_QL40_&dpSrc=srch

December 1991

The authoritative reference to VAX/VMS

Additional Information

TECHNOLOGY managed recently includes the following:

Front-end: Angular 2, React, Redux, Vue, Nodejs, JWT, OAuth, OpenID Connect, api.ai

Back-end: Java, JBPM, Wildfly, JBOSS, Spring Boot, C#, .Net, Redis, PHP5, Python, Blockstack

Databases: MS SQL Server, Oracle, MYSQL, PostgreSQL, MongoDB, ETL & Migration

Integration & Testing: Jenkins, Selenium, Jest, Mockjs, Wireshark

Security: Nessus, Tenable, OWASP, TSA ATO, SOC2, PCI, FedRAMP

Tools: JIRA, Confluence, Git, GitHub, BitBucket, Helix, Slack

Logging & Analytics: Elasticsearch, Logstash, Kibana, Grafana, Prometheus

Infrastructure & Deployment: VMware, Docker, Swarm, Ansible, AWS, Azure, GCP, Digital Ocean, Terraform, Secrets Management, High Availability & Disaster Recovery

Operating Systems: Linux, Windows, OSX