SANJAY NICHANI

San Diego, California ♦ https://www.linkedin.com/in/sanjnich/

Seeking opportunities in Artificial Intelligence and Machine Learning, with a focus on addressing impactful market needs and tackling complex technological challenges. With more than 25 years of extensive experience and a portfolio of 40 issued patents, I have a proven track record of successfully bootstrapping, developing, and guiding multiple R&D and Engineering teams. Additionally, I have played a pivotal role in inventing and refining cutting-edge technologies that currently drive numerous globally utilized products.

EXPERTISE

AI, ML, Deep Neural Networks, Edge Compute

Computer Vision, 3D Stereo, Object Detection

Generative Networks, Recommender Systems

Human Pose Estimation, Activity Recognition

Engineering Management, Agile Prod. Development

Technology Due Diligence, M&A, Patent Process

Leading Global & Diverse Teams, DEI Initiatives

Software Engineering, C++, Python, PyTorch, Matlab

WORK HISTORY

President/Chief Executive Officer/Consultant, 07/2023 to Current

Merakona Inc, Pelfunc LLC – San Diego, CA

- Currently developing two POCs: one for a note taking App utilizing generative AI for semantic search, summarization, and chatbot capabilities, and another for tools to create personalized children's e-books using large language models and stable diffusion.

Vice President, Artificial Intelligence & Computer Vision, 10/2020 to 7/2023

Peloton Interactive – New York, NY

- Led the development of the Peloton Guide, an AI strength training product that utilizes a monocular camera to stream classes led by top instructors, provide real-time feedback, and track metrics. This includes CV based product features like smart framing, movement tracking, rep counting, and form feedback. Provided technical direction for CV algorithms focusing on Object Detection, Human Pose Estimation, People Tracking, Pose Matching, and Activity Recognition.
- Led the AI/ML team responsible for Computer Vision and Personalization/Recommendation (the latter for all Peloton products). Grew team 8X through organic growth, M&A, and internal mobility. Established various functions such as Platform, Data Ops, R&D, MLE, QA, and Alpha/Beta testing.
- Oversaw mentorship and industry internship programs. Collaborated on ML career levels, compensation bands, and pioneered the TLM (technical lead manager) track at Peloton.
- Involved in the entire lifecycle of CV development for the Guide, including prototyping, scaling the solution, handling diversity, bias mitigation, hardware optimization, data operations, MLOPs, field testing, pre-launch model improvements, post-launch features, and production model monitoring.

Vice President, Computer Vision & Machine Learning, 10/2019 to 10/2020

Acuant Inc. – San Diego, CA

- Developed a CVML library for omni-channel document capture, data extraction, forensics, and face matching. Created a modular, optimized, and cross-platform architecture for the library, allowing for seamless integration across iOS, Android, Windows, and Linux.
- Integrated deep learning techniques into the Computer Vision pipeline, enhancing classification, object detection, segmentation, pattern matching, and anomaly detection.

Vice President, Mitek Labs, 03/2016 to 05/2019

Mitek Systems Inc – San Diego, CA

- Led the Mitek Labs computer vision and machine learning team to develop algorithms and technology to power products for Identity verification (MobileVerify) and check deposit (MobileDeposit). Co-invented the next generation ID verification CoreFlow pipeline, incorporating novel techniques for document detection, classification, extraction, authentication, and face verification.
- Established and managed a team of 40 scientists/engineers, responsible for hiring and integrating new resources. Successfully conducted due diligence and integration of multiple European acquisitions.

President/Chief Executive Officer/Consultant, 01/2007 to 02/2016

Merakona Inc, Pelfunc Inc – San Diego, CA

- Developed APATS, an anti-piggybacking and tailgating system, which detects unauthorized use of access control systems. The technology utilizes structured light and 3D technology for people sensing in revolving doors and has been licensed by two large door manufacturers.
- Developed 2D and 3D CV technologies for various OEM customers, including loss prevention in grocery stores, thrown object detection at airport exits, and drug identification for pharmacies.
- Pelfunc is the creator of "Squeak" technology and the Squeak16 App, a social network that introduced a new paradigm for mobile photo sharing by adding a timeline feature. Squeak16 allows users to add voice, sketch, zoom, and text to their pictures, creating 16-second animation clips.

Various Roles, Last: **Director, Advanced Products Group,** 12/1994 to 01/2007

Cognex Corp – Natick, MA

- Invented 3D vision technology for detecting and tracking people in unstructured environments, exploring its potential for applications like door activation and people counting. Developed Cognex Doorman, a 3D vision sensor for automatic sliding doors to detect objects and activate doors for people safely. Led Cognex People Sensor, a standalone 3D stereo vision sensor to enhance doorway security by counting people passing through access-controlled doors.
- Lead developer for Patmax, an advanced rotation and scale invariant pattern alignment tool, involved in the entire product development cycle, including design, optimization, and testing. Developed optimized routines for the Cognex Computer Vision library for various image processing operations like edge detection, peak detection, and image arithmetic using MMX/DSP SIMD technologies.

EDUCATION

- **MBA,** Entrepreneurship, **Babson College**   Boston, MA, 2008
- **MS**, Computer Science, **University of South Florida**   Tampa, FL, 1990
- **BE**, Electronics, **Bangalore University**   Bengaluru, India, 1987