

Gaile G. Gordon

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SUMMARY

Over 20 years experience in computer vision related product and R&D leadership. Proven track record transitioning technology from R&D to production in both enterprise and consumer markets. Co-founder of TYZX, which produced best of breed hardware accelerated 3D cameras and computer vision applications for a variety of markets including the security, robotics, and automotive industries. TYZX was acquired by Intel in 2012 and fueled their RealSense 3D technology products. Product experience spans custom ASICs, firmware, software APIs, to end user applications. Effective in wide range of environments including startups and large multinational corporations. Ph.D. from Harvard in 3D vision. MS and BS from the MIT AI Lab. Also advises early stage companies, assists investors with technical due diligence, and is an active angel investor.

PROFESSIONAL EXPERIENCE

Enlighted, Inc., Sunnyvale, CA 2016 - present
Vice President of Location Products

Enlighted is a major player in the smart commercial building space. Its key product is a dense sensor network whose installation cost is covered through energy savings, and which provides rich and granular data about what is happening in the building. This data can be used to derive meaningful insights about people and asset location patterns, enabling corporations to more effectively manage healthcare, office, and industrial facilities.

Initially part of the CTO Office. Transitioned to the Product Team in June 2016 to spearhead the introduction of "location as a service" products for the Enlighted network, based on Bluetooth Low Energy (BLE) signals. The "Where" location products include both a web application and native mobile applications for iOS and Android. The development effort touched on all of Enlighted's engineering teams including hardware for novel asset tags and badges, sensor firmware, and software including a new location algorithm team. Also managed Enlighted's IP portfolio from Jan 2016 to July 2017.

Honored to receive the sales team's MVP award for 2016.

LDV Capital, NYC 2018 - present
Expert in Residence

Intel Corporation, Menlo Park, CA 2012 - 2016
Principal Engineer, 3D Vision

TYZX was acquired by Intel in July 2012 and became part of the Perceptual Computing Group. Played key role in taking TYZX stereo vision technology to the next logical step - into the consumer market. Led camera interface and manufacturing software teams for Intel RealSense active stereo depth camera. Go-to domain expert for depth sensors and 3D computer vision. Projects were high profile Intel efforts, featured heavily at Intel CEO CES Keynotes from 2013, 2014, 2015.

After the first consumer product was introduced by HP in Dec 2015, changed focus to product deployment in embedded markets such as drones, robotics, and automotive.

<http://www.intel.com/content/www/us/en/architecture-and-technology/realsense-overview.html>

TYZX, Inc., Menlo Park, CA

2000 - 2012

Co-founder, Vice President Advanced Development

TYZX produced the world's fastest stereo vision systems as well as 3D image analysis applications for its partners in the security, automotive and robotics industries. The company was started in 2000 based both on the hardware stereo vision system and person tracking technology originally developed at Interval Research by myself and a co-founder, and on our conviction that small, low power, cheap 3D sensors would become the enabling technology for pervasive consumer price-point interactive products. This approach was ahead of the market, but has gained acceptance rapidly as the technology costs have dropped and interest in gesture interfaces and autonomous systems has increased (e.g. later competitors include PrimeSense, and Microsoft Kinect).

TYZX shipped products based on three generations of custom stereo correlation ASICs. Its 3D Embedded Vision Systems were used for evaluation of OEM product integration projects and as deployment platforms in lower volume markets. TYZX also created and sold a distributed Person Tracking system based on a network of TYZX embedded cameras. Notable public installations of our tracking system: Top of the Rockefeller Center, Indianapolis Airport, Guinness World Records on Hollywood Boulevard. Contract development activities focused on image analysis projects for customers in the automotive, mining, entertainment, industrial food processing, industrial safety, and person safety markets.

As VP Advanced Development, my responsibilities included directing contract software development, product software architecture and development, and patent activities. I was a member of the Board of Directors. I was also frequently involved with sales activities, and handled customer support, and IT for the company.

Interval Research Corporation, Palo Alto, CA

1996 - 2000

An independent research laboratory and incubator funded by Paul Allen. Its commercialization efforts were broadly aimed at the consumer market including communication, education, and entertainment applications.

Tyzz Advanced Development Team

Founder, Director of Vision (1999 - 2000)

The Tyzx advanced development project was focused on a commercial opportunity in the area of person tracking for “brick and mortar” retail stores. The business provided an information service for retailers providing real-time analytics on in-store consumer traffic patterns, purchase patterns, and sales associate productivity. This was enabled by a 3D person tracking system based on stereo vision that tracks the location of all the people in a store on a continuous basis. Tyzx was on the verge of spinning out as a new company when Interval was closed.

- Directed software development and algorithm design for computer vision systems.
- Led team that created original proof of concept tracking system that served as the primary demo for partners and funders over the course of the project. Demo performed successfully and was completed on time with an aggressive three month schedule.
- Member of the Executive Staff. Contributed to recruiting three major national chains as customer partners. Represented technical team at meetings with potential funders. First round of funding was nearly completed at time of closing (raised \$13.5 million of required \$17.5 million).
- Worked extensively with consultants and customers to define scope of the product.
- Handled all patent activity. Inventor on 3 of 4 patents filed for Tyzx technology.

Research Project: Visual Analysis of People

Project Coordinator (1996 - 1999)

- Led a team of 4 computer vision researchers and engineers investigating robust face detection and tracking, real time 3D pose tracking, and the novel use of real-time stereo data in combination with traditional color imagery.
- Team's work accepted for publication and presentation at the primary international graphics (SIGGRAPH) and vision conferences (ICCV, CVPR) and key journals (IJCV) in the computer vision field. Face tracking demonstration piece (Mass Hallucinations) installed for a six-month show at the San Jose Tech Museum.
- Research Area Director (May - July 99). Responsibilities included oversight of 5-6 research projects as well as providing input to the VP of Technology on research direction for new projects.

TASC, Inc., Reading, MA
Principal Member of Technical Staff

1991 - 1996

Principal investigator for a 3 year research contract funded by DARPA to develop advanced 3D face recognition algorithms for both still images and video sequences (FERET Program). Authored initial competitive proposal and was awarded 2 follow-on options in competitive down-select. Was the primary technical contributor for algorithm design and implementation and supervised work of 3 team members. Responsible for budget oversight and customer interface.

Contributions to other projects at TASC

Technical lead for automated visual inspection efforts in the automotive industry, content based image access, hyperspectral data analysis and shape analysis for 3D medical and dental imagery.

EDUCATION

Harvard University

Ph.D., Computer Science, 1991

MS, Computer Science 1989

Thesis with Prof. David Mumford on Face recognition using range data and curvature descriptors.

Massachusetts Institute of Technology

MS, Department of Electrical Engineering and Computer Science 1986

BS, Department of Electrical Engineering and Computer Science 1985

Masters thesis with Prof. W. Eric L. Grimson. Designed automated visual inspection process for tape heads in conjunction with Digital Equipment.

OTHER PROFESSIONAL ACTIVITIES

Advisor and investor. Advisor to early stage companies (CompoundEye, Caruma Technologies). Angel investor. Assists investors with technical due diligence.

Patents. 20 US Patents (17 Issued, 3 pending) <http://www.gailegordon.com/publications>

Publications. Author of more than 25 conference papers, journal papers and book chapters. Co-author of book on face recognition. <http://www.gailegordon.com/publications>

Invited Speaker. University of Maryland, Harvard University Robotics Laboratory, MIT AI Laboratory, CSIRO (Australian Government Research Laboratory), GETIS (G.E.Medical Systems, France), INPE (National Institute for Space Research, Brazil), Brown University.

Peer Reviewer. Invited participant in grant review panels for NIH and NSF. Reviewer for major journals for computer vision research (*Computer Vision and Image Understanding*, *IEEE Transactions on Pattern Analysis and Machine Intelligence*, *Journal of Visual Communications and Image Representation*, *Spatial Vision*, and *Journal of Electronic Imaging*).

Conferences. Member of the Program Committee for the International Conference on Automatic Face and Gesture Recognition (1996, 1998), and for the International Conference on Audio- and Video-based Biometric Person Authentication (1999).

National Science Foundation Summer Institute in Japan (Summer 1990)

Awarded internship at the Electrotechnical Laboratory, a Japanese Government research laboratory, as well as introductory Japanese language and cultural study.