

Gianni Giorgetti, PhD

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Software engineer and applied researcher with 30 years of software development experience, a PhD in Electrical Engineering, and deep expertise in computer vision, video analytics, indoor positioning, and signal processing. I help companies turn difficult technical problems into working prototypes, production systems, and measurable operational workflows.

Core Expertise: Computer Vision - Production CV Pipelines & Custom Model Deployment - Video Analytics - RF/RTLS Positioning Systems - Signal Processing - Sensor/Data Fusion & Filtering - Estimation and Tracking - Mobile & Cloud Computing - Wireless Networking - Embedded Systems

Professional Experience

- **2019-Present — Founder / Principal Consultant**, Stura, Inc - San Diego, CA
Founded and currently operate a boutique consulting company focused on designing, building, and maintaining custom video-analytics systems for real production environments. Stura technology currently runs on more than 2,000 cameras deployed worldwide, supporting clients with specific operational requirements and challenging real-world video conditions.
 - Built and maintained production video analytics systems operating across large distributed camera deployments.
 - Developed highly optimized video ingestion and processing pipelines capable of supporting hundreds of cameras per deployment.
 - Trained and evaluated custom computer vision models for object detection, image classification, and video classification tasks.
 - Designed end-to-end workflows for collecting video data, preparing datasets, evaluating model accuracy, deploying models, and monitoring system performance.

Technology stack: Python, OpenCV, PyTorch, Docker, Linux, FFmpeg, Django, PostgreSQL, Redis, JavaScript, C/C++, AWS

- **2015-2019 — VP of Research**, Accuware, Inc - Miami Beach, FL
Led research and development for Accuware's computer-vision technology, combining video analytics, and cloud infrastructure for operational deployments.
 - Developed and maintained production pedestrian detection and tracking systems used across multiple commercial video-analytics projects.
 - Built visual search and cross-camera re-identification technology using appearance models computed with custom-trained deep neural networks.
 - Worked across research, prototyping, production integration, and deployment support.

Technology stack: Java, Python, Docker, OpenCV, Torch, MATLAB, JNI, C/C++, Redis, AWS Lambda, AWS EC2, AWS S3

- **2010-2015 — Director of Research**, Navizon, Inc - Miami Beach, FL
Oversaw research and development of indoor positioning technologies for mobile navigation, passive tracking, and business-intelligence applications.
 - Developed mobile indoor-navigation technology combining inertial information with radio signals for sub-meter positioning in GPS-denied environments.
 - Developed remote monitoring and tracking systems based on self-configuring embedded devices collecting Wi-Fi and Bluetooth signals.
 - Supported technologies deployed in hundreds of sites worldwide for asset tracking, personnel tracking, and operational analytics.

Technology stack: Java, Android, Ruby, Redis, MATLAB, C/C++, REST APIs, AWS DynamoDB, AWS S3

- **2009-2010 — Interim Engineer**, Advanced Technologies Group, Qualcomm, Inc - San Diego, CA
Researched indoor positioning technologies for remote tracking of assets and personnel. Built a self-configuring IEEE 802.15.4 mesh network for tracking mobile tags via multilateration algorithms based on RSS measurements. The network was used to track volunteers inside Qualcomm offices over 12 months and received recognition as one of the best research projects at QTech 2010, Qualcomm's internal technology conference.

Technology stack: C/C++, IEEE 802.15.4, Eagle Schematics, MATLAB

Additional Experience

- **2016-Present — Founder and President**, TextRanch, LLC - online at www.textranch.com

Founded and operate TextRanch, a bootstrapped online proofreading and editing platform serving English learners, professionals, and businesses worldwide. The platform has grown to more than 1.0M registered users and maintains a 4.9/5 Excellent rating on Trustpilot across more than 2,100 reviews.

- Built the web application, payment workflow, internal operations tools, and editor-assignment process used to deliver fast human editing services at scale.
- Managed product, engineering, operations, customer support, pricing, and editor workflow for a live consumer and B2B service.
- Developed practical experience coordinating pools of skilled human workers, quality control, and fast-turnaround service delivery.

Technology stack: Django, PostgreSQL, Redis, JavaScript, Stripe, REST APIs

- **2003-2004 — *Research Associate***, Università degli Studi di Firenze - Italy
Contributed research on ad-hoc, low-power sensor networks during the proposal and initial phase of the GoodFood project, a 17.5M EUR EU-funded project. Developed PDA-based diagnostic tools to detect hard-to-reproduce failures in wireless systems.
- **1995-2003 — *Software Developer and Consultant***, self-employed - Italy
Developed custom software and computer architectures for small and medium-sized Italian companies across manufacturing, business operations, and technical applications.

Patents

- **US10026003B2** *Method and arrangement for receiving data about site traffic derived from imaging processing*. Issued Jul 17, 2018.
- **US9226224B1** *Method and system for obtaining information about Wi-Fi enabled telecommunications devices*. Issued Dec 29, 2015.
- **US8890705B2** *Location determination using radio wave measurements and pressure measurements*. Issued Nov 18, 2014.
- **US8774829B2** *Sensor node positioning for location determination*. Issued Jul 7, 2010.

Education

- **2005-2009 — *PhD, Electrical Engineering***, Arizona State University - Tempe, AZ, US
Research topics: Signal Processing, Parameter Estimation, RF-Based Localization.
Internships: Embedded Systems Research, Motorola Labs, Tempe, AZ, US (2006 and 2007).
Dissertation: “*RF-Based Localization in GPS-Denied Applications*”
- **2004-2007 — *Dottorato di Ricerca in RF, Microwaves, and Electromagnetism***, Università degli Studi di Firenze - Italy
Research topics: Wireless Sensor Networks, Remote Monitoring, Localization Services.
Dissertation: “*Resource-Constrained Localization in Sensor Networks*”
- **1999-2003 — *Laurea in Computer Science Engineering***, Università degli Studi di Firenze - Italy
Internship: Microfluidic Lab, Motorola Labs, Tempe, AZ, US (2002).
MS Thesis: Rapid On-Chip DNA Amplification

Selected Publications

- G. Giorgetti, R. Farley, K. Chikkappa, J. Ellis, and T. Kaleas. *Cortina: collaborative indoor positioning using low-power sensor networks*. Journal of Location Based Services, 6(3), 137-160, 2012.
- G. Giorgetti, S.K.S. Gupta, and G. Manes. *Understanding the Limits of Collaborative RF-Based Localization*. IEEE/ACM Transactions on Networking, 19(6), 1638-1651, 2011.
- A. Cidronali, S. Maddio, G. Giorgetti, and G. Manes. *Analysis and performance of a smart antenna for 2.45-GHz single-anchor indoor positioning*. IEEE Transactions on Microwave Theory and Techniques, 58(1), 21-31, 2010.
- G. Giorgetti, S. Maddio, A. Cidronali, S.K.S. Gupta, and G. Manes. *Switched Beam Antenna Design Principles for Angle of Arrival Estimation*. IEEE EuMW 2009.
- G. Giorgetti, A. Cidronali, S.K.S. Gupta, and G. Manes. *Single-Anchor Indoor Localization Using a Switched-Beam Antenna*. IEEE Communications Letters, 13(1), January 2009.
- G. Giorgetti, S.K.S. Gupta, and G. Manes. *Optimal RSS Threshold in Connectivity-Based Localization Schemes*. ACM MSWiM 2008.
- K. Bannister, G. Giorgetti, and S.K.S. Gupta. *Wireless Sensor Networking for Hot Applications: Effects of Temperature on Signal Strength, Data Collection and Localization*. HotEmNets 2008.
- G. Giorgetti, A. Cidronali, S.K.S. Gupta, and G. Manes. *Exploiting Low-Cost Directional Antennas in 2.4GHz IEEE 802.15.4 Wireless Sensor Networks*. IEEE EuMW 2007.
- G. Giorgetti, G. Manes, J.H. Lewis, S.T. Mastroianni, and S.K.S. Gupta. *The Personal Sensor Network: a User-Centric Monitoring Solution*. BodyNets 2007.
- G. Giorgetti, et al., *Wireless Localization Using Self-Organizing Maps*. ACM IPSN 2007.