Ganymed Stanek

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SUMMARY:

Hardware Manager with **background in EE**. **12 years** job experience, mainly working on **self-driving/automated vehicles** at **Mercedes, Volkswagen/Audi, Stanford, Peloton** & **Zoox** with focus in:
- **Hiring** and **Managing cross-functional teams** of electrical, mechanical and software engineers
- **Designing automotive-grade safety-critical vehicle ECUs** for automated vehicles
- Bringing a **hardware product from conception to production**
- Equipping cars & trucks with **drive-by-wire systems** and turning them into self-driving robotic vehicles
- Designing **board-level circuits** and **PCB design**
- **Firmware C programming** for **ARM/MSP430/PIC microcontrollers**
- Programming **C++ on Linux** for autonomously driving robotic cars and trucks
- **Technology scouting & rapid prototyping**
- **iOS apps 'Flight Time'** and **'Weekender'** in the App store (Objective-C)

PROFESSIONAL EXPERIENCE

Feb 2018 - now
Manager, Embedded Systems at **Zoox** (Foster City, CA)
Managing a team of 10 engineers (electrical engineers, low level software engineers and PCB Layout designers) to develop sensors, compute platforms and other electronics for Zoox's autonomous vehicles.

Jun 2013 - Feb 2018
Hardware and Firmware Manager at **Peloton Technology** (Mountain View, CA)
First full-time employee and core member of the small team that designed the first prototype of Peloton's truck platooning system. Built up the hardware & firmware team and interviewed 100+ candidates for various roles in the company at all levels. Headed the design & development of Peloton's first production hardware including an automotive-grade safety-critical Linux-capable ECU, display and user interface elements from conception through design, DFM, validation & compliance to launch readiness. Processor selection, PCB design, Coding (uC firmware, Linux C++, Android).

Mar 2011 - Jun 2013
Lead Engineer at **PANASONIC Silicon Valley Research Lab** (Cupertino, CA)
Primary hardware engineer for Universal Design Group. Responsible for scouting emerging technologies and incorporating them into prototypes for new concepts and securing IP. Embedded circuit design and firmware programming. Focus on energy harvesting and low power (MSP430). Wrote reference device driver for Panasonic Gyro for Qualcomm Snapdragon Android platform. Managed contractors.

Mar 2013
Consulting for **VOLKSWAGEN** to upgrade the drive-by-wire on Stanford's self-driving car.

Jan 2010 - Nov 2010
Part time 30%
Electrical Systems Engineer at **JOBY ENERGY** (Santa Cruz, CA)
Designing PCBs for motor controllers and switched power supplies for autonomous airborne vehicles.

Jul 2007 - Mar 2011
Systems Engineer at **STANFORD UNIVERSITY** AI Lab, CS Department (Stanford, CA)
Designing drive-by-wire systems for research vehicles including the Autonomous Audi Pikes Peak TTS and Volkswagen Passat Junior. PIC33 and ARM Cortex M3 based microcontroller circuits. Embedded software design in C building on the Keil RL-ARM real-time OS. Extended the Stanford Autonomous Driving Software Framework to detect empty parking spaces using LIDAR sensor data. Project Manager for Autonomous Audi TTS managing an interdisciplinary project team of engineers, PhD students & technicians. Autonomous drive onto stage for Audi CEO keynote at Geneva Motor Show.

Jan 2006 - Jul 2007
Intern at **VOLKSWAGEN of America Electronics Research Lab** (Palo Alto, CA)
Designing & programming PIC microcontroller circuits for a restored VW Bus, car key with MEMS display and an autonomous research vehicle. Successful technology scouting for an automated defog system. Eventually leading a project team of 4 engineers and 2 technicians with $500k annual budget turning a VW Passat into the self-driving research vehicle "Junior" for participation in the DARPA Urban Grand Challenge 2007 (race of self-driving cars in an urban environment). Designed hardware architecture & drive-by-wire system incl. PCB design & embedded C programming of custom PIC microcontroller circuit boards interconnected via CAN networks. The participation was a joint effort with the Stanford University and other companies forming the Stanford Racing Team, in which I held the function Vehicle Hardware Lead Engineer.

May 2004 – Jan 2006
Part time
Founding Employee, Technical Advisor, Investor at **Yalea Languages Ltd**. www.yalea.ch (Switzerland)
Online travel agency specializing in study abroad Spanish & English language courses. Coordinated website design & development. Outsourcing to India. Webserver Administration. Recruited programmers.

2001 – 2004
Part time
Teaching Assistant (TA) at **INSTITUTE FOR ELECTRONICS - ETH Zürich** (Switzerland)
Basic analog and digital circuits courses for computer science students.

Jul 2003 – Aug 2003
Semester Thesis in **Controls Engineering** at **DaimlerChrysler AG** (Stuttgart, Germany)
Programmed control algorithms for autonomous steering of a Mercedes concept car (PID/Sliding Mode).

DEGREE

Oct 1999 - May 2005
Master's of Science in **Electrical Engineering & Information Technology**
ETH Zürich (Swiss Federal Institute of Technology), GPA 5.28 out of 6, (Switzerland)

Nov 2004 - May 2005
Exchange student at **UC SANTA CRUZ** writing Master's thesis in Computer Engineering department

SOFTWARE: Altium Designer (PCB), Keil RL-ARM rtos. Vector CANoe, vim, Solidworks

CODING: C (PIC, ARM, MSP 430), C++, Objective-C (iOS), Java (Android, Servlet), SQL, Qt, bash

PATENTS

Nov 2016, Peloton, US patent application
WO2017070714A9

Vehicle identification and localization using senor fusion and inter-vehicle communication

Aug 2015, Peloton, US patent application
WO2017035516A1

Devices systems and methods for vehicle monitoring and platooning

Jun 2014, Panasonic, US patent grant
US 9,330,306 B2

3D Gesture Stabilization for Robust Input Control in Mobile Environments

Nov 2012, Panasonic, US patent grant
US 9151803 B2

Pairing Method Based on Electric Current Synchronicity for Augmented Batteries

Nov 2012, Panasonic, US patent grant
US 8847775 B2

Tangible Charge Level Awareness Method & Apparatus using Augmented Batteries

Jul 2007, Volkswagen, US patent application
US 12/049,291

Method for Processing Data Based on an Evaluation of Real-Time Measurements of Movements of a User in a Vehicle and Based on Statistical Data on User Interactions With Input Devices in the Vehicle

PAPERS

2012 IEEE Intelligent Vehicles Symposium
(IV 2012), June 3-7, 2012,
Alcalá de Henares, Spain

Up to the Limits: Autonomous Audi TTS
Dirk Langer*, Joseph Funke, Paul Theodosis, Rami Hindiyeh, Krisada Kritayakirana, Chris Gerdes, Bernhard Mueller-Bessler, Burkhard Huhnke, Marcial Hernandez, Ganymed Stanek

2011 IEEE Intelligent Vehicles Symposium
(IV 2011), June 5 - 9, 2011,
in Baden-Baden, Germany

Towards Fully Autonomous Driving: Systems and Algorithms
Jesse Levinson, Jake Askeland, Jan Becker, Jennifer Dolson, David Held, Sören Kammel, J. Zico Kolter, Dirk Langer, Oliver Pink, Vaughan Pratt, Michael Sokolsky, Ganymed Stanek, David Stavens, Alex Teichman, Moritz Werling, Sebastian Thrun

2010 IEEE Intelligent Vehicles Symposium
(IV 2010), June 21-24, 2010,
in San Diego, California, USA.

Junior 3: A Test Platform for Advanced Driver Assistance Systems
Award of Distinction for Poster Presentation
Ganymed Stanek from Stanford University
Dirk Langer, Bernhard Mueller, Burkhard Huhnke from Volkswagen AG

12th International Conference on Information Fusion
July 6-9, 2009, Seattle, WA, USA

Integrated Probabilistic Approach to Environmental Perception with Self-Diagnosis Capability for Advanced Driver Assistance Systems
Jiri Jerhot, Marc-Michael Meinecke, Thomas Form from Volkswagen AG
Thien-Nghia Nguyen from Univ. of Magdeburg
Ganymed Stanek from Stanford University
Jörn Knaup from Volkswagen AG

Journal of Field Robotics
Volume 25, Issue 9 (September 2008)
Special Issue on the 2007 DARPA Urban
Challenge, Part II, Pages 569-597
Year of Publication: 2008
ISSN:1556-4959

Junior: The Stanford Entry in the Urban Challenge.
Jan Becker, Suhrid Bhat, Hendrik Dahlkamp, Dmitri Dolgov, Scott Ettinger, Dirk Haehnel, Tim Hilden, Gabe Hoffmann, Burkhard Huhnke, Doug Johnston, Stefan Klumpp, Dirk Langer, Anthony Levandowski, Jesse Levinson, Julien Marcil, Michael Montemerlo, David Orenstein, Johannes Paefgen, Isaac Penny, Anna Petrovskaya, Mike Pflueger, Ganymed Stanek, David Stavens, Sebastian Thrun, and Antone Vogt.

Workshop on Distributed Smart Cameras
(DSC 2006) held in conjunction with ACM
SenSys 2006
October 31st, 2006, Boulder, CO, USA

Meerkats: A Power-Aware, Self-Managing Wireless Camera Network for Wide Area Monitoring
C. B. Margi, X. Lu, G. Zhang, G. Stanek, R. Manduchi, K. Obraczka

LANGUAGES

German	Native
English	Fluent
French	Advanced
Portuguese	Intermediate
Spanish	Basic understanding

OFF THE JOB

Relevant personal projects:

- Developed **iOS app 'Flight Time'** for pilots to log flight duration and number of landings automatically using GPS.
www.stanek.us/FlightTime (In the App Store since May 2012)

- Developed **iOS app 'Weekender'**, a calendar for your spare time
www.weekender.mobi (In the App Store since Sep 2013)

- One of 40 selected out of a field of 3000 to be a potential military or commercial pilot by Swiss government. Was sponsored for a private pilot license during the selection process.