

Ganymed Stanek

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SUMMARY:

Robotics Engineer with 3.5 years experience **designing board-level circuits** and **programming C for PIC/ARM microcontrollers** and **C++ Linux** for autonomously driving robotic cars. Two years of **project management** experience leading a team in turning stock cars into autonomously driving robotic research vehicles. **Background in EE, CE and web programming.**

EDUCATION

- Oct 1999 - May 2005 **Master's of Science in Electrical Engineering & Information Technology SWISS FEDERAL INSTITUTE OF TECHNOLOGY (ETH)**, (GPA 5.28 out of 6), Zürich
Course Focus: Computer architecture and networks, operating system concepts, control theory
- Nov 2004 - May 2005 Exchange student at **UC SANTA CRUZ** writing Master's thesis on sensor networks
- Projects
Bluetooth file share client for Java ME capable mobile phones
Energy-conserving camera scheduling policies for sensor networks

PROFESSIONAL EXPERIENCE

- July 2007 - now **Systems Engineer**, AI Lab, CS Department at **STANFORD UNIVERSITY** (Palo Alto, CA)
Continuing my position 'Vehicle Hardware Lead Engineer' in the Stanford Racing Team, see below. Invited keynote speaker at international talks. Designing drive-by-wire systems for further research vehicles including an autonomous Audi TTS. ARM7 and ARM Cortex M3 based microcontroller circuits.
- Sep 2006 - Jul 2007 **VOLKSWAGEN of America Electronics Research Lab** (Palo Alto, CA)
Project Manager Autonomous Driving leading team of 4 engineers and 2 technicians with \$500k annual budget turning a Volkswagen Passat into the self-driving research vehicle "Stanley Junior" for participation in the DARPA Urban Grand Challenge 2007 (first race of self-driving cars in an urban environment). Designed hardware architecture including drive-by-wire system consisting of several custom PIC microcontroller circuit boards interconnected via a CAN network. Programmed majority of low-level (embedded C) software. 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.
- Jan 2006 - Aug 2006 **Intern** designing & programming PIC microcontroller circuits for a restored VW Bus, car key with MEMS display and the autonomous driving project. Successful technology scouting.
- May 2004 - Jan 2006 **Technical consultant and cofounder of YALEA Ltd.** yalea.com (Switzerland)
Part time
Responsible for technical aspects of company. Yalea is an online travel agency specializing in study abroad Spanish language courses. Coordinated entire website production. Outsourced parts of programming & graphical design to India. Webserver Administration. Recruited programmers.
- 2001 - 2004 **Teaching Assistant (TA)** at **INSTITUTE FOR ELECTRONICS - ETH Zürich** (Switzerland)
Part time
Basic analog and digital circuits courses for computer science students.
- Jul 2003 - Aug 2003 **Semester Thesis** in **Control Engineering** at **DaimlerChrysler AG** (Stuttgart, Germany)
Programmed control algorithms for autonomous steering of a Mercedes concept car (PID/Sliding Mode).
- Jun 2002 - Aug 2002 **Intern** at **BEMATECH** Ind. e Com. de Equipamentos Eletrônicos S.A. (Curitiba, Brazil)
Developed microcontroller related hardware and ported an arithmetic C library to an ARM processor.
- Feb 2001 - Mar 2001 **Java Programmer** (Servlet crawling intranet to find broken links) at **SIEMENS** (Switzerland)
- Feb 2000 - Mar 2000 **Intern** (CNC manufacturing & manual workshop skills) at **RUAG AEROSPACE** (Switzerland)

SOFTWARE:

Altium Designer (PCB), Solidworks (learning), Vector CANoe, Microchip MPLAB, Keil uVision, Xcode, Eclipse, Photoshop, vim

CODING:

C++, C (including PIC μ C architecture), Java (SE, ME, JSP, Servlets), PHP, SQL (Postgres), Matlab, Delphi, bash scripts

PATENTS

July 2007, Volkswagen, patent pending

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

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 Volkswagen of America
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

INVITED SPEECHES

Urban Challenge Symposium & Workshop
Charles Stark Draper Laboratory
Cambridge, MA
June 24th-25th, 2008

Technical talk

Junior in the Urban Challenge - Key Enabling Technologies and Technical Challenges

III Congresso SAE BRASIL – Tração Total (Resende, Brasil), June 6th, 2008

Keynote speech

Veículos fora de estrada não tripulados – Lições do DARPA Grand Challenge

Singapore Science Center
June 28th, 2007

Keynote speech at the opening of the exhibition of the robot car 'Stanley'
'Stanley', the Winning Robot of the Grand Challenge 2005

Singapore Science Center
June 29th, 2007

Talk as part of Science in the Café

Talk to Defense Science Organization

Sensors and Algorithms enabling 'Stanley' to Win the Grand Challenge

LANGUAGES

German Native
English Fluent
French Advanced
Portuguese Intermediate
Spanish Basic

OFF THE JOB

Relevant personal projects:

- One of 40 chosen 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.
- Personal webserver administration for incremental remote backup