

Tomas Pfister

Education

- 2011–2015 **University of Oxford**, *DPhil Engineering Science*, Visual Geometry Group.
○ Supervisor: Prof Andrew Zisserman. ○ Research topic: British Sign Language Recognition.
- 2007–2010 **University of Cambridge**, *BA (Hons) Computer Science*, class 1.
○ Courses include: Algorithms, Computer Vision, Software Engineering.
○ Dissertation: Emotion Detection from Speech. Work outperforms previous research.
- 2004–2007 **Mattlidens Gymnasium**, *International Baccalaureate*, Finland, 43 points (45 max).
○ Higher level: Mathematics (7), English A2 (6), Swedish A1 (7).
○ Subsidiary level: Physics (7), Economics (7), Chemistry (7) (7 max).

Awards

- University ○ Five research awards for pioneering facial micro-expression work at University of Oulu including 250 000 EUR in project funding from the Finnish Funding Agency for Technology and Innovation.
○ Cambridge European Trust scholar 2007–2010.
○ Gonville & Caius College scholar for outstanding academic achievement.
○ Final year dissertation runner-up for departmental prize.
○ Nominated for the prestigious European Science, Engineering & Technology Student of the Year award.
- High School ○ Academy of Finland prize for outstanding research. Offered a lifetime study place at the most competitive university department in Finland.
○ Finnish Technology Industry prize for extraordinarily high score in final mathematics exam.
○ Prizes for outstanding academic achievement 2004–2007.

Publications

- [1] T. Pfister, X. Li, G. Zhao, and M. Pietikäinen, "Recognising spontaneous facial micro-expressions," in *International Conference on Computer Vision (ICCV)*, 2011.
- [2] T. Pfister, X. Li, G. Zhao, and M. Pietikäinen, "Differentiating spontaneous from posed facial expressions within a generic facial expression recognition framework," in *Workshop on Socially Intelligent Surveillance and Monitoring, International Conference on Computer Vision (ICCV)*, 2011.
- [3] T. Pfister and P. Robinson, "Real-time recognition of affective states from non-verbal features of speech and its application for public speaking skill analysis," in *IEEE Transactions on Affective Computing (TAFFC)*, 2011.
- [4] T. Pfister and P. Robinson, "Speech emotion classification and public speaking skill assessment," in *Workshop on Human Behavior Understanding, International Conference on Pattern Recognition (ICPR)*, 2010.

Experience

Research Experience

- Sep 2010–
Aug 2011 **Researcher (national service)**, *Machine Vision Group*, University of Oulu.
○ Research topic: Recognising spontaneous facial micro-expressions.
○ Developed the first system to automatically recognise spontaneous facial micro-expressions.
○ Work published in International Conference on Computer Vision (ICCV).
- Sep 2009–
Mar 2010 **Researcher**, *Rainbow Group*, Computer Laboratory, University of Cambridge.
○ Research topic: Real-time recognition of affective states from non-verbal features of speech.
○ Developed a novel method for real-time inference of affect from speech and analysis of public speaking skills;
○ Presented a paper on the work in Human Behaviour Understanding Workshop, ICPR 2010.
- Jun–Aug 2009 **Research Intern**, *Rainbow Group*, Computer Laboratory, University of Cambridge.
○ Research topic: Facial expression and head movement mimicry for social robotics.
○ Developed and published an open-source robot controller which continues to be used by other researchers;
○ System demoed at HCI 2009 conference with demo shown on BBC News.

Work Experience

- Jul–Oct 2011 **Engineering Intern**, *Google*, Mountain View, CA.

- 2001–to date **Chief Technology Officer, SJR Host, Lahti, Finland.**
 SJR Host provides web hosting and virtual server services.
- Led the research and development of new services, formulating long-term technical and business strategies;
 - Oversaw the correct operation and security of mission-critical servers hosting large multi-national companies;
 - Guided and supported staff and important clients in person, by phone and e-mail;
 - Engineered large-scale software and systems for both the company and its clients.
- Jun–Sep 2008 **Software Engineer, AlertMe, Cambridge, UK.**
 AlertMe provides home and energy monitoring solutions.
- Initiated and introduced a scheme for saving costs and increasing productivity by virtualising company servers using the Xen environment;
 - Resolved crucial production system instability by clustering and optimising database servers;
 - Implemented and documented database support in C back-end;
 - Accelerated customer service response times by redesigning PHP customer control panel.
- Aug–Sep 2007 **Software Engineer, Star Pointers, Nummela, Finland.**
 ○ Developed a portal using code from an open-source content management system.
- Jun 2004 & Aug 2007 **Software Engineer, Ekolab, Espoo, Finland.**
 ○ Developed two multilingual company websites with PHP and MySQL.

Voluntary Work

- May 2006–to date **Closed Beta Tester, Skype, Prague; Athens; London.**
 ○ Proposed features and company strategies to CEO and staff in international conferences;
 ○ Engineered software for facilitating testing of applications and devices.
- Sep 2007 **Systems Consultant, United Nations Development Programme, Zambia, online.**
 ○ Eliminated web server performance issues as a consultant for the IT department.
- May 2004–Jun 2006 **Java Project Maintainer and Developer, TWcore, online.**
 ○ Maintained a large open-source Java-MySQL bot project for an online game with over 10 000 active users;
 ○ Supervised the security, performance and overall quality of the product;
 ○ Co-ordinated tasks between developers and motivated them when necessary;
 ○ Solved both technical and social issues arising from the development.
- Oct 2005–Jun 2006 **Software Engineer and Systems Consultant, Amnesty International, Helsinki.**
 ○ Consulted the organisation for its major technical investments and decisions;
 ○ Developed an online domestic violence database and front-end with PHP and MySQL.
- Feb 2004–May 2006 **Software Engineer, Mattliden's school, Espoo, Finland.**
 ○ Designed and maintained a student absence tracker with PHP and MySQL;
 ○ Engineered and designed a new school website.

Technical Skills

- Programming
- Strong: Java, C/C++, Matlab, SML, PHP, UNIX shell;
 - Intermediate: Python, Verilog, assembly.
- Operating Systems
- Excellent knowledge of UNIX systems (Debian Linux & Mac OS X).

Languages

- Fluent English, Swedish, Finnish
- Intermediate German, Chinese

Positions of Responsibility & Interests

- University
- Represented Computer Science undergraduates on the Faculty Board and in the Student-Staff Consultative Committee 2008–2009.
 - Organised the first and highly successful International Freshers' Week as the international representative for Gonville & Caius College and voiced students' concerns for the JCR committee.
 - Coached and competed in a relay race team for the College athletics club.
 - Rowed for the College boat club, rain or shine, with 6am starts and 10am lectures.
- High School
- Represented Finland in the Model European Parliament's Committee of Economic and Monetary Affairs in Tallinn, March 2006.
- Interests
- Running, playing badminton, learning Chinese, playing music and trying out new sports.
 - Travelled to 28 countries on 3 continents.

References

Available on request.