

Jonas Nathan Schwertfeger

jschwertfeger@gmail.com ▪ <http://www.cs.brown.edu/~js/> ▪ Zurich ▪ Switzerland

Professional Experience

- **Scientific Consultant, Software Engineer**, Stan James Plc, Gibraltar (9/08–now)
 - Designed and tested statistical models for prediction of soccer and tennis match outcomes.
 - Led architecture and development of automated pricing system for sports betting markets.
 - Designed and implemented system for storage of current and historic sports event information.
- **Software Engineer Intern**, Microsoft Inc., Seattle, WA, USA (2/08–5/08)
 - Designed and implemented speech synthesis and speech recognition services for Microsoft's Robotics Developer Studio 2.0.
 - Extended Microsoft's Decentralized Software Services framework (DSS) with data transport layer based on interprocess communication.
 - Planned and prototyped visual scene classification system.
- **Software Engineer Intern**, Google Inc., Mountain View, CA, USA (6/07–8/07)
 - Designed and implemented changes to Google's video advertisement back-end that allow for integration of YouTube videos into Google's content advertisement system.
 - Proposed and prototyped enhancements to Google's internal source code and documentation management system.
- **Software Developer**, Sensational AG, Zurich, Switzerland (9/04–10/04 and 9/03–10/03)
 - Developed graphical ordering system for Intermec CK1 mobile bar code scanner.
 - Wrote software for embedded Linux system running on an ARM microcontroller.
 - Designed and implemented software for capturing and encoding of satellite TV channels and streaming them over the Internet.
- **Software Developer/System Administrator**, Berufsbildner AG, Baden, Switzerland (9/03–06/08)
 - Planned, designed and developed web-based course management and accounting software using Ruby on Rails, PHP and MySQL.
 - Built up and maintained IT infrastructure for a small office.
- **IT Apprentice**, UBS AG, Zurich and Basel, Switzerland (8/99–7/03)
Apprentice in the field of application development.
 - Designed, implemented and tested interface and reporting software for PeopleSoft's Human Resources Management System (SQR, Perl, Oracle RDBMS)
 - Developed software for banking in general (Cobol, Oracle RDBMS).

Education

- **Brown University**, Providence, RI (9/06–5/08)
M.S. in Computer Science
Selected courses: Introduction to Machine Learning, Recent Applications of Probability and Statistics, Statistical Models in Natural Language Processing, Building Intelligent Robots, Robot Learning and Autonomy, Introduction to Cryptography.
- **University of Applied Sciences Rapperswil**, Rapperswil-Jona, Switzerland (10/03–6/06)
Diploma in Computer Science; awarded for best diploma thesis in spring 2006.
- **Technical Vocational School Zurich**, Zurich, Switzerland (8/99–7/03)
Apprenticeship in the field of application development with on-the-job training at financial firm UBS AG.

Research Experience And Selected Projects

- **Robotics Project** at Brown University (Spring 2007)
Designed and built SmURV robotics platform (based on iRobot Create and Mini-ITX system).
- **Robotics Project** at Brown University (Fall 2006)
Multi-Robot Task Allocation Through Belief Propagation on Markov Random Fields.
- **Diploma Thesis** at University of Applied Sciences Rapperswil (Spring 2006)
Building Access Control – A Public-Key-Infrastructure Approach Using Contactless Smart Cards.
- **Semester Project** at University of Applied Sciences Rapperswil (Spring 2005)
A Network-Capable Range Sensor Based on Depth-from-Defocus.

Publications

- J. Butterfield, O. C. Jenkins, D. M. Sobel, and J. Schwertfeger. **Modeling Aspects of Theory of Mind with Markov Random Fields**. In *International Journal of Social Robotics*, 2008.
- M. Lapping-Carr, O. C. Jenkins, T. Hinkle, J. Schwertfeger, and D. Grollman. **Wiimote Interfaces for Lifelong Robot Learning**. At *AAAI 2008 Spring Symposium on Using AI to Motivate Greater Participation in Computer Science*, 2008.
- M. Kostandov, J. Schwertfeger, O. C. Jenkins, R. Jianu, M. Buller, D. Hartmann, M. Loper, A. Tsoli, M. Vondrak, W. Zhou, and M. Fiala. **Robot Gaming and Learning using Augmented Reality**. At *ACM SIGGRAPH 2007 Poster Compendium*, 2007.
- J. N. Schwertfeger and O. C. Jenkins. **Multi-robot belief propagation for distributed robot allocation**. In *Proceedings of the 6th IEEE International Conference on Development and Learning (ICDL)*, 2007.

Teaching Experience

- **Head Teaching Assistant** for class *Building Intelligent Robots* at Brown University (Fall 2007)
- **Junior Examiner**, Examination Board for IT Professions, Zurich, Switzerland (9/03–8/06)
Supervised and assessed IT apprenticeship examinations as well as final projects.

Awards And Honors

- Awarded Leica stipend in 2006
- Awarded for best diploma thesis of spring 2006 by University of Applied Sciences Rapperswil.
- Awarded by UBS AG for highest CGPA of all 138 apprenticeship graduates in 2003.
- Honored by Joseph Deiss, Swiss minister of national economy, for results achieved at 37th WorldSkills Competition 2003 in the field of application development.
- Ranked 4th at the WorldSkills Competition 2003 in trade application development.
- Ranked 5th and 8th (at 2nd competition) at Swiss Olympiad in Informatics 2003.
- Ranked 4th at Swiss Championship for Informatics Professions 2002.
- Ranked 3rd at Swiss Olympiad in Informatics 2002.

Languages

German (native speaker). Fluent in English and conversational in French.

Nationality

Swiss.

Other Interests

Traveling, photography, cooking, and technology in general.