babak@mensa.se babak2@kth.se



Engineer in Electrotechnics

Master's in Autonomous Systems, AI & Computer Vision

KEY COMPETENCIES		
Programming languages :	C/C++, JAVA, MIPS Assembler, Visual Basic, Visual C#, Forte Java, Jbuilder, MySQL, Prolog LISP	
Software :	Matlab, PSpice, Mathematica, Visual Studio, MS Office, PSP, Maple	
Computer Science :	Algorithmic, CPU architecture, Data Mining, Artificial Intelligence, Machine Learning, Computer Vision, Digital Image Processing, ANN	
Electronics :	Circuit analysis, Analog and Digital electronics, Measurement Technology, Electric Power Systems, HF Electronics	
Mathematics :	Calculus (multivariable), Vector analysis, Probability Theory and Statistics, Application of Numerical methods, Optimization, Transforms, Linear Algebra, Complex Analysis	
System theory :	Signal & System analysis, Communication theory, Medical Imagery, Development of technical systems and projects, Digital Signal Processing, Mathematical System Theory	
Physics :	Mechanics, Thermodynamics, Wave Physics, Quantum Physics, Material Physics, Electromagnetic Theory, Semiconductor Physics	
Automatics :	Modelling of Dynamical Systems, Automatic control (linear & non-linear)	
Platforms :	MS Windows, Linux, UNIX	
Languages :	Farsi (mother tongue), Swedish (fluently), English (fluently), French (fluently)	
WORK EXPERIEN		
2005 : Guest researc	cher , visiting academic at the NICTA institution in Canberra, Australia. Worked on the Smart	

	Cars project. Involved in commercial and industrial relations for the project as well as improving the existing algorithms of the existing software.	
2004 :	Caretaker (assistant nurse), Employed at the Hospital of Sollentuna, Nytorpshemmet department during summer of 2004.	
2003 :	Assistant math teacher for the course "Matematik III". Employed at the Math Institution of RIT (KTH) during the spring 2003.	
2002 :	Nursery of elderly in part time. Employed at the Nurse and Care Office in the municipality of Sollentuna, Sweden.	
2001 :	Assistant math teacher for the courses "Matematik I" and the course "Matematik II". Employed at the Math Institution of RIT (KTH) during the fall 2001.	
	Telemarketing consultant at the BITE-corporation during summer of 2001. BITE is a telecommunications company that hires telemarketing related services.	
	Substitute teacher in mathematics and science at the Österholm junior high in Skärholmen, every now	

Computer input of statistics at CPM (Center for Preventive Medicine) at the Karolinska Hospital during the fall 2000. Karolinska is one of Sweden's largest hospitals.		
Accompany/escort for mentally handicapped children at the Social Welfare Office in the municipality of Sollentuna, on the side of my studies during year 2000.		
Mailman at the Swedish Postal Service, for the district area of Sollentuna, during Christmas holidays, Easter holidays and the summer of 2000.		
Mailman at the Swedish Postal Service, for the district area of Sollentuna, during Christmas holidays, Easter holidays and the summer of 1999.		
Phone-salesman at the "Cancer- och Allergifonden" in Stockholm during Christmas holidays 1998. This organization works with the subscription of money-donators for the research field of cancer and allergies.		
1996 : Paper-boy for SDR and Hemmedia (S-post) during weekends and holidays from winter 1995 till fall 1998. SDR and S-post are two large advertisement companies in Sweden.		
PROJECTS AND EDUCATION		
2006 : PhD student at CVAP, KTH. Employed as a PhD-candidate, will participate in the PACO+ project that starts spring 2006.		
Economy student at the Stockholm University (SU), in parallel with "quant" (quantitative researcher) studies at the math department at KTH.		
2005 : Master thesis in computer vision. "A Visual Attention System combining Top-down and Bottom-up influences". Related article sent to ECC06.		
2003-2004 : Continued Engineer Diploma. One year of exchange studies at the "grand école" of engineering Supélec (École Supérieure d'Électricite), Métz, France.		
2000-2005 : MSc in Engineering. Master of Engineering in Electrotechnics at KTH (Royal Institute of Technology), Stockholm, Sweden. Three years of base studies before specialization.		
1997-2000 : Upper secondary school degree in with specialization in Mathematics. Three years at the senior high school of Mathematics in Danderyd, Sweden. Where 10 university courses in mathematics was part of the education.		
SCHOLARSHIPS		

- PhD Honour Grant ("Excellenstjänst") at KTH one of 4 annual PhD-students all across KTH that receive *central* employment. Valid for 5 study years.
- The Swedish-French Institute c/o Ulf Berenholt 15 000 SEK
- ERASMUS 18 000 SEK
- CivilingenjörsFörbundet (CF) 12 000 SEK
- **KTH** 8000 SEK

EXTRA-CURRICULAR ACTIVITIES

- Member of Mensa (<u>www.mensa.org</u>)
- Member of the electronics club at kth (ELAB, <u>www.elab.kth.se</u>)
- Secretary at the electro-department (2002) (www.e.kth.se)
- Webmaster and PR-responsible in the Persian students union SIS (<u>www.sispersia.com</u>)

INTERESTS – Scientific

- Artificial intelligence, Neural Networks, cognitive psychology, computer vision and machine learning.
- Autonomous systems, control and robotics
- Quantitative Analysis in Finance and Investment

INTERESTS – Other

- Travel, books, music, movies, art
- Sports (Climbing, Football, Basketball)