Cameron Morland

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Skill Summary

Background in computational modelling, neural networks, signal processing, analysis.

Capable with UNIX, GNU/Linux, MacOS, Windows, programming.

Skilled at teaching.

Inventive and ingenious.

Formal Education

Boston University, Philosophy Doctorate, Cognitive and Neural Systems. Study of sensory substitution, sonar, and audition, May 2009. Thesis Advisor: David Mountain.

Boston University, Master of Arts, Cognitive and Neural Systems, January 2009.

University of Waterloo, Bachelor of Applied Science, Mechanical Engineering; Mechatronics Option, Cognitive Science Option, 2003. Undergraduate Thesis Advisor: Jan Paul Huissoon.

Lisgar Collegiate Institute, Ontario scholar, 1998.

Technical Work Experience

MRI Research Assistant, Hospital for Sick Children (Toronto), Medical Imaging Department. (Winter & August 2002) Research in physics of functional MRI. Supercomputing applications using IPC and POSIX threads.

AI Researcher, Applied AI Systems, Inc. (Summer 2001). Developed vision based landmark recognition and landmark navigation on an intelligent wheelchair. Over-saw rapid construction of the chair.

AI Researcher, Applied AI Systems, Inc. (Fall 2000). Examined the problem of compliant manipulators, especially as related to Behaviour-Based robotics. Constructed a computer controlled prototype.

Assistant Engineer, Dew Engineering (Winter 2000). Mechanical and electrical design and prototyping of an instrumented landmine prodder.

Associate Systems Engineer, ATI Technologies Inc. (Summer 1999). UNIX system administration and programming. Maintained SAP system, developed dynamic web pages. Created administrative tools.

Programmer, Carleton University Electrical and Computer Systems Department (1996-1997). Programmed a pair of robots, inter-computer communications, joint manipulation, and a command interpreter.

Volunteer Work Experience

Free Software Maintainer:
`http://changetrack.sourceforge.net/` (1999 to present),
`http://rasp.sourceforge.net/` (2007 to present),
`http://cns.bu.edu/~cjmorlan/robotics/octplayer/` (2004 to present).

Graphic Designer/Editor, *Alere Flammam*, *The Encyclical*, *The Lisgarwrite* (1996 to 1998).

Monitor and System Administrator, student computer lab, Lisgar Collegiate Institute (1994 to 1998).

Secretary, Chaudière Area Support Team, Scouts Canada. Created and distributed minutes for the meetings, aided communication (1997 to 1998).

Counsellor, Christie Lake Camp. Taught and worked with a group of underprivileged children (1994 to 1997).

Extra-curricular Activities

Dumpster-diving, University of Waterloo. Recovering mechanical and computer "treasures" that the university has thrown out. (1998 to 2003).

Wizard and Governor General, Waterloo Nomic Club (1998 to 1999).

International Student Space Simulation (1993 to 2000). Design and construction of simulation equipment, teaching kids about science and space exploration.

Minister of Finance and Secretary of State, Lisgar Nomic Club (1994 to 1996).

Youth Member, Scouts Canada (1985 to 1995).

Hobby-Robotics

Competed in the 1994 Sumo Robotics competition in Toronto.

Designed and built a self-mobile robotic base for a robotic arm; also designed and built a robotic claw for the arm.

Awards

Leonardo da Vinci Scholar, for outstanding achievement in the University of Toronto engineering contest, 1998.

High standing in countless mathematics competitions and the 1998 Canadian Computing Competition.

Lisgar Academic Achievement Award.

Interests

Cognitive systems, especially autonomous robotics.

Free software and free culture: development of Freeciv, Changetrack, Rasp.

Computer programming: C, C++, Fortran, Java, Octave/Matlab, Pascal, PHP, Postscript, Perl, Python, x86 assembler, other languages.

Languages: English, French, Esperanto, Classical Latin, German, Classical Greek, ⠏⠁⠏⠁⠏⠁ (Braille).

Music: violin, mandolin, singing, flute, multi-frequency singing.

Bicycling, camping, canoeing, hiking, winter camping.

Typography and typesetting, including LaTeX.