Greg Elfers

519-851-9438   work@greg.elfers.ca   1400 Riverbend Road, Unit 93 London Ontario N6K 0G8

Profile

I am a research oriented problem solver able to employ a broad base of skills, with a desire to work in vision systems, with an eye towards Computer Vision, Computational Photography, Machine Learning, and Autonomous Systems.

Education

Western University, London, Ontario — Masters of Science Computer Science 2015
Western University, London, Ontario — Hon. Bachelor Of Science Computer Science 2011
Radio College of Canada, Toronto, Ontario — Electrical Engineering Technician 1996

Skills

LANGUAGES

Strong Knowledge of C, C++, MATLAB, QT
Competent in Java, JavaScript, HTML5, QML
Working knowledge of Python, PHP, Ruby, SQL, DOM/XML
Familiarity with, R, Go, Processing, Scheme, CUDA

AREAS OF STUDY

Strong knowledge of image processing and machine learning
Experienced in software design, design methodology and systems architecture
Experienced in UX design and Human Computer Interaction
Experienced in embedded system design and digital signal processing
Working Knowledge of multi-threaded, multi-process, parallel computing

SYSTEM ENVIRONMENTS

Comfortable developing for Windows, Unix, OS-X, and RTOS environments
Experienced in ARM based embedded systems
Working knowledge of RTOS environments such as TiRTOS, QNX and FreeRTOS
Some experience with Blackberry, iPhone and Android development environments

TOOLS AND DEVELOPMENT ENVIRONMENTS

Experienced with QTDesigner, Eclipse, and versioning repositories (GIT,SVN)
Experienced with Microsoft Office, iWork, and Adobe Creative Suite
Experienced with Agile work flows and project management tools
Working Knowledge of Code Composer Studio, IAR Workbench
Familiar with NetBeans, Visual Studio, Xcode

Experience

RIPTIDE TEK/ECOINSIGHT INSTRUMENTS, LONDON ON – 2013-PRESENT

SYSTEMS ARCHITECT (2017-PRESENT)

- Designed and co-ordinated the development of all aspects of the Riptide Tek's flagship, grease monitoring system, including guiding developers, designing user experiences, and choosing development platforms and libraries.
- Oversaw key product redesigns, initiated cloud compute and web app functionality, as well as facilitating company wide understanding of product capabilities and function.

LEAD DEVELOPER (2015 - 2017)

- Designed and developed signal processing and autonomous control methodologies, directed and refined improvements in radio communication for locations with difficult and unreliable communication paths.
- Drove significant battery life improvement through optimization of RTOS functions, minimization of operational and communication overhead, and implementing more efficient hardware specific data processing algorithms.

DEVELOPER (2013-2015)

- Created software tools and test environments for ultrasonic measurement instrument prototypes.
- Wrote visualization, peak finding and noise reduction algorithms to improve system accuracy.
- Implemented split spectrum processing techniques to generate multiple weak classifiers for interface identification algorithms.

RESEARCH ASSISTANT, DR. A. PRAKASH, WESTERN ENGINEERING – 2013-2015

- Worked with Dr. Prakash and his graduate students to develop ultrasonic measurement methodologies to determine material stratification in commercial grease interceptors.
- Developed test protocols, signal processing strategies, and statistical signal analyses to maximize measurement reliability and accuracy.

CONTRACT SOFTWARE ARCHITECT, USES INTEGRATED, LONDON,ON – 2013-2015

Contracts included:
- Developing, prototyping and integrating of small, modular, and connected sensor modules into data/asset tracking system for government tender.
- Developing monitoring applications for ARM based devices to facilitate USES Integrated's mission of designing environmentally friendly hyper-scale high performance compute servers.

TEACHING ASSISTANT, WESTERN UNIVERSITY, LONDON,ON – 2011-2013

Helped design assignments, supervised student labs, marked work, filled in for professors and assisted students in a one-on-one environment to allow for a more effective student learning environment.

Courses taught included:

- CS 1026 – Introduction to Computer Science,
- CS 3305 – Operating Systems,
- CS 3357 – Computer Networks I

RESEARCH ASSISTANT, DR. S. BEAUCHEMIN , ROADLAB WESTERN UNIVERSITY – 2010-2011

- Reverse engineered GM's low speed CANBUS instrument coding scheme for the RoadLAB testbed vehicle.
- Wrote a graphical interface to allow researchers to review vehicle and instrumentation telemetry either in real time, or synced to captured video in recorded vehicle test drives.

RESEARCH ASSISTANT, DR. G. OSINSKI, CPSX, WESTERN UNIVERSITY – 2009-2010

- Designed and developed departmental and professorial websites, course registration, e-commerce, and web applications to allow researchers to communicate details of their research and improve tools for collaboration and educational outreach.

WEB DESIGNER, COMMUNICATIONS AND PUBLIC AFFAIRS, WESTERN UNIVERSITY – 2009-2010

- Designed and developed websites including structural and aesthetic design work using HTML, JavaScript, CSS, and dynamic content creation.
- Created digital audio archives, video interviews and blogs for professors and faculties.
- Improved the visual presentation and organization of existing websites to enhance user accessibility.

STAGEHAND, FREELANCE (FRISCHKORN AV, DPL SOUND, WESTERN FAIR,UWO,IATSE) – 2003-2013

- Helped clients to produce corporate meetings, conferences, trade shows, live theatre, music festivals, concerts, fashion shows, independent and large budget films while producing the highest quality productions possible under real-time and time critical production schedules.
- Managed both professional and amateur acts as well as technical staff to produce high quality entertainment; established the safest, most comfortable and enjoyable experience possible for performers, patrons and staff.

POST SALES SERVICE TECHNICIAN, NORTEL/PCS – 1997-2002

- Troubleshot and repaired a wide variety of telephony products for Nortel Networks Public Access Systems Division.
- Developed and documented new repair and refurbishment procedures.
- Trained production workers on new repair procedures to improve profitability of existing repair lines while maintaining throughput and quality control targets.