Lee Morton

Curriculum Vitae

Contact details redacted

Profile

I currently work in the UK for Renishaw developing software to process data from the Sprint scanning probe used in industrial CNC milling machines. I am seeking employment as a software engineer. I am looking for a company that can provide me with interesting and challenging problems to solve.

Programming Languages and Technogies C++, Python (data analysis), Java, Mathematica, C#, C (embedded), J2ME, Android, CUDA, XML, Matlab

Experience and Education

2015

Software Engineer, *Renishaw*.

Summary I produce software to support the Sprint scanning probe used in industrial CNC machines. Our software processes data from the probe and can be used for part verification or adaptive machining.

- Implemented customer specific software and proved out complex processes on customer sites
- Made significant contributions to the development of new technologies and applications
- Actively proposed and implemented improvements to our software including usability, API design and architecture
- Significantly improved the testing of our products and the culture of testing within our team
- Re-implemented several core algorithms to make them faster or more accurate
- Analysis of test data

2011 2015

PhD, *Glasgow Caledonian University*.

Title Inertial Motion Capture for At-Home Rehabilitation

Summary This project covered the design testing and implementation of an inertial motion capture system to be used in at–home rehabilitation applications.[1,2] My co-researchers were responsible for developing patient facing visualisations, I was responsible for designing, developing and testing all technological aspects of the motion capture system including:

- Radio network protocols (XBee and ANT)
- Embedded software (C, FreeRTOS)
- Desktop configuration and visualisation software (Java, Processing, Python)
- Calibration techniques
- Testing with an optical motion capture system (Mathematica)

2015 **Algorithms: Analysis and Design, Part 1**, *Stanford*, Online Course.

2015 **Algorithms: Analysis and Design, Part 2**, *Stanford*, Online Course.

2015 **Parallel and Heterogeneous Programming**, *Illinois, Urbana–Champaign*, Online Course.

2012 **Machine Learning**, *Stanford*, Online Course.

2008 2011 **Research Associate**, *Glasgow Caledonian University*.

Summary I specialized in human computer interaction in mobile computing applications. My responsibilities included: developing software for research projects, contributing to publications and teaching students including tutorials and lectures.

Projects
- Monitoring physical activity patterns using accelerometers and GPS[3]
- Location aware mobile games[4–6]
- Supervision of interns sponsored by Orange Research[7,8]
- Working with primary and secondary schools to develop an interactive guide to the 2014 Glasgow Commonwealth Games
- Custom application commissions from businesses[9]

2008 2009 **PGDip, Advanced Computing**, *Glasgow Caledonian University*.

2008 **Putting Java to Work**, *Open University*.

2008 **CCNA: Cisco Certified Network Associate**, *Open University*.

2007 **Object Oriented Programming with Java**, *Open University*.

2007 2008 **Teacher of Mathematics**, *Stratford Upon Avon High School*.

2005 2007 **Supply Teacher**, *Direct Solutions*.

2004 2005 **Postgraduate Certificate in Education**, *Warwick University*.

1999 2003 **MPhys, Physics**, *Oxford University*.

Major Options Atoms, Lasers and Optics, Solid State Physics

Project Exploring the Feasibility of a Mechanical Amplifier

Publications

1. M. Ayoade, L. Morton, and L. Baillie. "Investigating the feasibility of a wireless motion capture system to aid in the rehabilitation of total knee replacement patients". In: *2011 5th International Conference on Pervasive Computing Technologies for Healthcare PervasiveHealth and Workshops*. IEEE, 2011,
2. L. Morton, L. Baillie, and R. Ramirez-Iniguez. "Pose calibrations for inertial sensors in rehabilitation applications". In: *2013 IEEE 9th International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob)* (2013),
3. L. Baillie, L. Morton, G. MacLellan, and G. Ryde. "Designing a mobile application to capture everyday activity". In: *Proceedings of the 11th International Conference on Human-Computer Interaction with Mobile Devices and Services - MobileHCI '09* (2009),
4. J. Mcvicar, L. Morton, L. Baillie, A. Komninos, F. Hussain, and Z. Abdullah. "Zombies vs Humans". In: *In Evaluating Player Experiences in Location Aware Games Workshop in conjuction with the 22nd annual Conference on Interaction (HCI2008)*. 2008.
5. L. Baillie, L. Morton, D. C. Moffat, and S. Uzor. "Capturing the response of players to a location-based game". In: *Personal and Ubiquitous Computing* 15.2011 (2011),
6. L. Baillie, L. Morton, S. Uzor, and D. C. Moffatt. "An investigation of user responses to specifically designed activities in a multimodal location based game". In: *Journal on Multimodal User Interfaces* 3.2010 (2010),
7. D. Beattie, L. Baillie, and L. Morton. "Feeling the next track: designing mobile music player previews". In: *Proceeding MobileHCI '11. Proceedings of the 13th International Conference on Human Computer Interaction with Mobile Devices and Services* (2011),
8. L. Baillie, D. Beattie, and L. Morton. "Feel what you hear: haptic feedback as an accompaniment to mobile music playback". In: *Proceedings of Interacting with Sound Workshop: Exploring Context-Aware, Local and Social Audio Applications* (2011),
9. L. Baillie and L. Morton. "Designing quick & dirty applications for mobiles: Making the case for the utility of HCI principles". In: *Proceedings of the International Conference on Information Technology Interfaces, ITI* (2009),

References

References available on request