Lee Morton

Curriculum Vitae

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Profile

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

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



Experience and Education

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
- Made significant contributions to the development of new technologies and applications.
- Significantly improved the testing of our products and the culture of testing within our
- Re-implemented several core algorithms to make them faster or more accurate.
- Data analysis

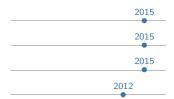


PhD, Glasgow Caledonian University.

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^{1,9}. 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)



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

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

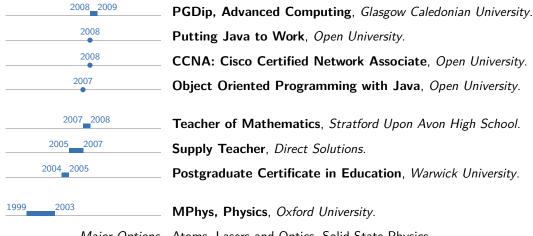
Parallel and Heterogeneous Programming, Illinois, Urbana-Champaign, Online Course.

Machine Learning, Stanford, Online Course.

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 GPS³
 - Location aware mobile games^{4,5,8}
 - Supervision of interns sponsored by Orange Research^{6,7}
 - Working with primary and secondary schools to develop an interactive guide to the 2014 Glasgow Commonwealth Games
 - Custom application commissions from businesses²



Major Options Atoms, Lasers and Optics, Solid State Physics Exploring the Feasibility of a Mechanical Amplifier

Publications

- 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, pp. 404-407.
- 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), pp. 293-298.
- 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), p. 1.
- 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), pp. 179-188.
- 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), pp. 13-24.
- 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), pp. 1-6.
- 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), pp. 659-662.
- 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).
- 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), pp. 204-211.

References

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