

Connaught Automotive Research Lab
Dept. of Electronic Engineering
National University of Ireland, Galway

February 16, 2015

To Whom it May Concern,

I'm writing to apply for the position of software engineer working on Software Defined Networking (SDN) architecture and Network Functions Virtualization (NFV) at Intel Shannon, as advertised on LinkedIn.

I feel like I would be a perfect fit for this position, I have a strong networking background through my PhD work which utilises network simulation and LXC extensively. My programming strengths include Python, C and C++, as well as Java and a familiarity with Assembly language and embedded devices.

I have a strong Linux background also, having provided expert Linux consulting services to Smarterer, an online teaching and learning resource.

My current work with Netfort Technologies involves benchmarking and improving the network performance of their core product, a network monitoring appliance.

I have published several peer reviewed academic papers on networking related topics, in highly ranked IEEE journals. Through my PhD work, I have excellent self management skills and pride myself in being an independent worker. Naturally, given my PhD topic is networking related, I have an excellent grasp of network concepts and programming.

I look forward to hearing from you soon.

Kind Regards,

Shane Tuohy



Shane Tuohy

Education

- 2010–2015 **PhD, National University of Ireland, Galway.**
(projected) My PhD work is concerned with the specific demands of using Ethernet technology to network the numerous digital cameras and associated back end vision and scene analysis sub-systems that will be deployed in the next generation of vehicles.
- 2012–2013 **Visiting Researcher, University of California San Diego.**
I spent 7 months working with Professor Mohan Trivedi at LISA (Laboratory for Intelligent and Safe Automobiles), working on real world implementations of automotive Ethernet networks.
- 2006–2010 **B.E Electronic & Computer Engineering, National University of Ireland, Galway, First Class Honours.**
My final year research project involved developing a novel automotive distance determination algorithm using OpenCV. This won the 2010 Avaya Award for Best Final Year Project and a research paper based on it was published at a peer reviewed conference.

Publications

- S. Tuohy, M. Glavin, C. Hughes, E. Jones, M. Trivedi, and L. Kilmartin, "Intra-Vehicle Networks : A Review," *IEEE Transactions on Intelligent Transportation Systems*, pp. 1–12, 2014.
- S. Tuohy, M. Glavin, E. Jones, M. Trivedi, and L. Kilmartin, "Next Generation Wired Intra-Vehicle Networks , A Review," in *IEEE Intelligent Vehicles Symposium 2013*, 2013.
- S. Tuohy, M. Glavin, C. Hughes, E. Jones, and L. Kilmartin, "An ns-3 Based Simulation Testbed for In-Vehicle Communication Networks," in *UKPEW 2011*, (Bradford), 2011.
- S. Tuohy, D. O'Cualain, E. Jones, and M. Glavin, "Distance Determination for an Automobile Environment using Inverse Perspective Mapping in OpenCV," in *IET Irish Signals and Systems Conference*, pp. 100–105, IET, 2010.

Experience

- 2015 **Research and Development Engineer, Netfort Technologies, Galway, Ireland.**
Netfort LANGuardian is a leading industry network monitoring tool, I work on networking performance analysis and improvement.

- 2014 **Web Developer**, *Level Four Research and Consultancy Limited*, Galway, Ireland.
I have been working on a contract basis on PHP web applications.
- MySQL and PHP development of new features in an MVC architecture
 - Integration with commercial SMS APIs and designing automated email notifications
- 2009 **Research and Development Engineer**, *Netfort Technologies*, Galway, Ireland.
I spent 6 months working on all aspects of the LANGuardian project, an enterprise network monitoring tool.
While working at Netfort, I;
- Incorporated several new features into LANGuardian such as;
 - BitTorrent monitoring
 - Improved boot procedures
 - Extended hardware support
 - Regularly assisted the support team to help answer customer questions.
 - Worked on a small, dynamic engineering team in a variety of languages
- 2008 **Programming Technician**, *ESB*, Lanesborough, Ireland.
I spent 3 months working primarily with Microsoft Office products to develop reporting tools as well as a live updating digital noticeboard.

Skills

- Programming in a wide variety of languages, from assembly to web applications
- Linux server administration experience
- Electronic Engineering background, including analogue, digital and FPGA design
- Excellent interpersonal, public speaking and written communication skills

Programming Skills

High Level	Python, Java, C++, PHP, C#	Low Level	ASM, C, FORTRAN, VHDL
Linux Admin	LXC, LAMP, LDAP, Exim	Scripting	bash, Perl, tcl
Frameworks	ns-3, OpenCV, Android, flask	Tools	EC2, git, CVS

Languages

English	Native
Irish	Fluent
French	Intermediate

Achievements and Awards

- 2010 Avaya Prize for Best Final Year Project
- Awarded Irish Research Council EMBARK EPS Scholarship
- Represented NUI Galway at varsity level in squash
- Produced, researched and presented multiple FM radio shows
- President of NUI Galway Computer Society for 2 years
- Founding member of NUIG Skeptic Society

References

- Mark McDonagh - HP Cloud Services (Formerly of Netfort Technologies)
 - Dr. Martin Glavin - National University of Ireland Galway
 - Liam Kilmartin - National University of Ireland Galway
- Contact details available on request*