

Ivan A. Uemlianin

ivan@llaisdy.com

6 Tai Seion
Llanddeiniolen
Caernarfon
Gwynedd LL55 3AF
Wales, UK

Nationality: British
Date of birth: 27th December 1966

Professional Experience

Current and recent positions

2020-	Senior Engineer, Alert Logic Working on the Complex analytics support and in particular championing the log correlations feature. The role involves meeting technical challenges, joining or creating ad-hoc cross-functional teams, and increasingly, driving and leading innovation.
2018-2019	Senior Erlang Developer, Arweave A large part of my work involved scrutiny of the legacy codebase and protocol documentation, driving the internal critique and discussion that led to the improvements and innovations outlined in the yellow paper . My other contributions include better economic modelling and forecasting, a priority queue for more rational TX propagation, and interfaces with IPFS (e.g. How to set up and run Arweave+IPFS nodes).
2014-2018	Chief Scientist, Dasudian / 大数点 I developed initial implementations in Erlang and R, and provided guidance to developers on Erlang and statistics. See for example rErlang , which runs an interactive R session from Erlang. In 2017-18 I was invited to speak at WTO (Shenzhen), OECD (Bangkok) and ADB (Chang Mai) meetings.
2011-2014	Software Developer (Erlang, Python), Beatbullying In collaboration with Beatbullying's counselling staff and digital media team, I developed a therapeutically-oriented social networking platform. It was effective and highly regarded. In 2014 it was running in eight countries across Europe. For a semi-technical overview, see Beatbullying's paper at CHI 2012 , entitled " We're Altogether Better ". See also LIGA , an Erlang library for language identification I developed for this project.
2003-	Self-employed software consultant, Llaisdy Specialising in graphs & networks (social and otherwise) and natural language processing. Below I list some recent projects. See also my open-source projects on github: https://github.com/llaisdy/ .

Car hire website (2016-2020, intermittent)

Tech: complicated code archaeology; credit card payment APIs. The small focussed team working well together — me, a javascript developer, and the firm’s CEO as domain expert and Filemaker developer — was the main attraction.

Corporate social networking (2015-2016)

For a GP alliance in Cheshire, I developed a social networking platform based around knowledge-sharing and continuous professional development, with a nurse-location matchmaking function.

Computing semantic similarity (2015)

For a UK medical startup, I ported a Java library that quantified semantic similarity between English sentences (based on WordNet) to Python.

SMPP gateway (2013-2014)

For a small international SMPP marketing company, I developed a reliable, high-throughput SMPP router. This delivered marketing SMS messages in volume to Europe and Africa. Notable tech: complex routing logic (on top of RabbitMQ); runtime code generation for highly concurrent access to information.

Big March (2010)

This was a digital marketing campaign which involved a “virtual march” across the web. I was the main server-side developer, working with frontenders and BB’s digital team. The campaign won several prestigious international awards: [BeatBullying’s campaign](#) [The Big March collects awards](#).

Previous employment

2004-2010	Research Officer, Language Technologies Unit, Canolfan Bedwyr, University of Wales Bangor Joined the team developing infrastructure used to develop Welsh & Irish synthetic voices (WISPR). Later, supervised an innovative machine translation project for Welsh news subtitles; managed project and implemented recogniser for desktop command-and-control application.
2002-2003	Project Leader, Speech Recognition Research and Development, Jura Technology Limited Successfully applied for, won and completed a DTI Smart project to develop a prototype speech-recognition plug-in for Jura Technology’s categorisation and knowledge management software.
2001-2002	Head of Topic Map Development, Jura Technology Limited Developed Topic Map processor as part of Jura’s automatic categorisation and knowledge management software. Participated in strategic business planning. Represented Jura in international discussions, e.g. at OASIS.
1994-1999	Teaching fellow, School of Psychology, University of Wales Bangor Organised & taught under- & post-graduate courses and projects, introducing web-based teaching & assessment where appropriate. This often involved managing a small team of staff, as well as supporting students.
March-May 1996	Visiting fellow, Department of English Philology, Pomor State University

	Advised staff on course content; held seminars & tutorials on English phonetics and rhetoric.
1989-1994	Tutor (part-time), Department of Linguistics, University of Edinburgh Held tutorials on linguistics and phonetics; marked exams & term papers; acted as personal tutor; trained staff on the CHILDES child language database.
1990-1993	Editorial assistant (part-time), <i>The encyclopaedia of language and linguistics</i> , Pergamon Press Ltd. Carried out editorial work including proof-reading, and verification of bibliographies, enabling publication of the encyclopaedia on time.
1989-1990	Research associate, Centre for Speech Technology Research, University of Edinburgh Developed & maintained a database of spoken British English, used in training synthesisers & recognisers; trained staff in spectrograph analysis.
June-Sept 1988	Research assistant, <i>Survey of the Gaelic dialects of Scotland</i> , Dublin Institute for Advanced Studies Assisted in the compilation of phonetic data from paper to electronic media for the Survey.

Publications

2019	<i>Block Chain Based Intelligent Industrial Network</i> . Automation, Control and Intelligent Systems, 7, 1.
2018	“Big Data, Machine Learning, and Statistical Business Registers” Invited talk at Asian Development Bank Regional Conference on 2008 System of National Accounts. Chang Mai, Thailand, 2018/09/27.
2017	“Big Data and Bigger Pies” Invited talk at OECD Initiative for Policy Dialogue on Global Value Chains, Production Transformation and Development, 9th Plenary meeting. Bangkok, Thailand, 2017/11/16. “The Internet of Value / 价值互联网” Invited talk at WTO Global Value Chain Innovation Development Summit. Shenzhen, China, 2017/10/13.
2009	<i>Developing speech recognition software for command-and-control applications</i> . Canolfan Bedwyr, University Bangor, final report for project <i>Basic Speech Recognition 2008-9</i> .
2008	Review of Dayley, B.: <i>SAMS Teach Yourself Django in 24 Hours</i> . <i>CVu</i> , 20, 3.
2007	Review of Chun, W. J.: <i>Core Python Programming</i> . <i>CVu</i> , 19, 5. Review of Burke, D.: <i>Speech Processing for IP Networks: Media Resource Control Protocol</i> . <i>CVu</i> , 19, 4.
2006	<i>Tools and resources for speech synthesis arising from a Welsh TTS project</i> . Fifth Language Resources and Evaluation Conference (LREC), Genoa, Italy, 24-26 May 2006 (with Briony Williams & Rhys Jones). Review of Martelli, Ravenscroft, Ascher (eds): <i>Python Cookbook, 2nd edn</i> . <i>CVu</i> , 18, 6. Review of Rappin & Dunn: <i>wxPython in Action</i> . <i>CVu</i> , 18, 4. Review of Lutz: <i>Python Pocket Reference, 3rd edn</i> . <i>CVu</i> , 18, 2.

- 2005 “SpeechCluster: A speech database builder’s multitool” Paper given at Lesser Used Languages & Computer Linguistics, European Academy Bozen/Bolzano, Italy, October 2005.
- Review of Robertson, J. & S. Robertson: *Requirements-Led Project Management*. *CVu* , 17, 2.
- Review of Gottesdiener, Ellen: *Requirements by Collaboration*. *CVu* , 17, 2.
- 2004 Review of Niemeyer, P., *et al.* : *Learning Java 2ed*. *CVu* , 16, 6.
- Review of Palmer, Grant: *Technical Java*. *CVu* , 16, 6.
- Review of Lutz, Ascher: *Learning Python, 2nd Ed*. *CVu* , 16, 5.
- Review of Powers, Shelley: *Practical RDF*. *CVu* , 16, 2.
- Review of Korf, I., *et al.* : *BLAST*. *CVu* , 16, 2.
- Review of Markel, S & D. Leon: *Sequence Analysis in a Nutshell*. *CVu* , 16, 2.
- 2003 Review of Mertz, D.: *Text Processing in Python*. *CVu* , 15, 6.
- 2000 *Engaging text: assessing paraphrase and understanding*. *Studies in Higher Education*, 25, 3.
- 1999 Review of Lightfoot, D.: *The development of language: acquisition, change and evolution*. *Journal of Child Language*, 26, 3.
- 1998 “Entertainment and education: a case study of a newsgroup as an on-line tutorial” Paper given at Computers in Psychology conference, University of York. .
- “ASI & IT questionnaires and students’ performance” Paper given at Computers in Psychology conference, University of York. (with Mike Beverley).
- “A positive rôle for OMR forms in assessment” Paper given at Computers in Psychology conference, University of York. (with Mike Beverley).
- “Some problems with the Developmental Lexical Principles Framework” Paper given at University of Sussex, School of Cognitive Science research seminar.
- “Vygotsky, quantification and lexical development” Paper given at University of Wales Bangor, School of English and Linguistics research seminar.
- 1997 “A formal analysis of dialogue and problem solving using a Vygotskian paradigm” Paper given at University of Wales Bangor School of Psychology Mini-Conference, University of Wales, Bangor.
- 1994 “Particularising the intranet: the activity of syncretism in the child” Paper given at University of Edinburgh Postgraduate Linguistics Conference.

Education

- 2005 Diploma in Statistics, Open University
- 1995 Ph.D. in Linguistics, *The development of the subject category in first language acquisition*, University of Edinburgh
- 1989 M.A. Linguistics with Artificial Intelligence, University of Edinburgh

Languages

Native	British English
Elementary	Russian, Welsh
Basic	Chinese (Mandarin)