Laurie Lugrin

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Interests

NLP	semantic text annotation, entity linking, word embeddings
Machine learning	Bayesian statistics and probabilistic programming, data viz, recommender systems
Programming	Python (NumPy, pandas, sklearn), Scala/Spark, bash, Matlab/Octave, C++

Experience

R&D NLP engineer at *idioplatform*, London, UK Jan 2015 – today

• *idio* helps brands better understand their prospects and their online content, in order to build a marketing strategy driven by data. As part of the research team, I worked on the semantic text analysis engine at the core of *idio*'s content management system.

• Developed a state-of-the-art Named-Entity Recognition and Disambiguation system, beating dbpedia-spotlight, Zemanta and Alchemy in F1-score on academic data sets. Built various evaluation tools: a precision and recall evaluator for model selection and fine tuning; a non-regression tool with detailed feedback for identifying patterns in errors; a tool that creates specialised test sets for clients interested in a specific domain (fashion, finance); a grid-search-inspired hyper-parameter optimisation tool with visual output to provide insights on the role of each parameter.

• Built an ontology incorporating different data sources. It is regularly updated with new topics imported from open-source knowledge bases. This allows us to pick up the latest topics, for example new technologies and current affairs. Implemented a sanity check tool for our ontology, identifying orphan or duplicated entities as well as anomalies (rule-based), so that we are confident in releasing updates.

• Maintained and improved our data pipeline automation tool. We can rebuild any intermediate or production data set in one command line.

• Presented my work to business teams during Agile sprint reviews.

Risk software engineer at *RenaissanceRe*, Dublin, Ireland Jan 2012 – Dec 2013

• *RenaissanceRe* is a re-insurance company with a large volume of contracts signed daily. As part of the backend team, I made sure the analysts had the best tools to understand and quote their deals.

• Rewrote the insurance risk-estimation software using Monte-Carlo methods, improving speed, maintainability and extensibility.

• Designed a data format for contract terms that is intuitive to analysts and has a straightforward implementation. Replaced the legacy undocumented data format and the corresponding cryptic processing logic. Proved the equivalence of the two representations. Wrote a migration tool to transform the legacy files.

• Developed a new software that generates different scenarios of human errors and estimates their impact, accommodating to various parameters such as profession, region and type of insurance; from requirement analysis to tests and integration.

Software engineer at *Moody's analytics*, Montbonnot, France June – Aug 2011

• Developed a rule-based system that determines the safety-net threshold for bank loans according to regulations.

Research assistant at *Verimag Lab*, Grenoble, France Oct 2009 – Dec 2010

• Formulated a method for comparing energy consumption models of wireless sensor networks. Performed a case-study using the datasheet of the embedded radio device CC1100.

Computer science tutor at *Joseph Fourier University*, Grenoble, France 2008 – 2010

• Led 150 hours of tutorials and practical labs: C, algorithms, formal languages, automata theory.

Research intern at *University of Toronto*, Canada May – Sep 2008

• Joined the formal methods research team and carried out experiments on their software model-checker.

Education

Coursera Game theory, R language, Machine Learning, Data Analysis and Statistical Inference

Meetups and conferences PyData, South England NLP, RecSys. Gave a talk at PyData Paris 2016

M.Sc. on Computer Science, minor on Artificial Intelligence, *Joseph Fourier University*, France Jun 2009