Lucas Wilson | NLP Engineer& Chatbot Developer

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Experienced Full-Stack, Chatbot Developer and NLP Engineer with a background in Computational Linguistics and AI and6 years of professional experience applying NLP methods to real-world challenges across different domains.

Work Experience

Chatbot Development Consultant & Founder (self-employed)   **Pars Labs, Netherlands**
deep learning • machine learning • python • rasa • dialogflow • manychat   *April 2018–present*

Working on long-term projects as an NLP specialist and Chatbot Developer.
- Research on intent detection and named entity recognition approaches for chatbots
- Working both with voice and text-based chatbots
- Giving consultations and recommendations on chatbot development (healthcare chatbot, mental health chatbot, financial assistant)
- Designing and developing chatbots from scratch using Rasa, DialogFlow and ManyChat(language learning chatbot, HR chatbot)
- Reviewing and improving existing conversation flows and chatbot implementations (property rental assistant, financial assistant)
- Managing chatbot development processes (financial assistant)
- Giving workshops and tutorials on chatbot development (Rasa and DialogFlow)

Full-stack Developer   **Similar.ai, Netherlands**
machine learning • python • django • web-crawling   *July 2020–October 2022*

Developing SEO platform helping big marketplace companies rank higher on Google.
- Build new features for any part of the product
- Take care of new customer implementations
- Write crawlers
- Build ML models
- Add new features to the UI
- Do data analytics in Google Data Studio

Chatbot Developer & Co-founder   **Spok, Remote**
python • rasa • architecture   *December 2019–February 2021*

- Freelancer (December 2019 - September 2020)
- Co-founder (September 2020 - February 2021)

At Spok, we have been building a language-learning e-tutor. I was responsible for the technical implementation of the chatbot from scratch. This involved designing the chatbot, setting up the project architecture and doing the implementation itself. I was in charge of training the assistant, labelling the data, adding new features and iteratively improving it.

NLP Architect & Chatbot Developer   **COIN, Remote**
python • DialogFlow • conversation design   *August 2019–December 2019*

Working in a team as an NLP Architect Chatbot expert building a financial chatbot assistant. Took part in re-architecturing the chatbot, worked on developing a strategy for expanding the chatbot to new languages and new communication platforms, improved the workflow and was guiding the chatbot development process.

NLP Research Engineer   **TextKernel, Amsterdam**
sequence labelling • transfer learning cross-lingual embeddings • tensorflow   *November 2018–July 2019*

Working full-time in a document understanding team, doing research and development on multilingual CV parsing for low-resource languages.
- Developed a universal Slavic CV parsing pipeline for 5 languages, using transfer learning and cross-lingual embeddings
- Built a cross-lingual model that performs well in zero-shot CV parsing scenario
- Developed guidelines and best practices for learning cross-lingual embeddings and doing transfer learning for our task of CV parsing
- Created new intrinsic metrics for evaluating the quality of cross-lingual word embeddings
- Improved error analysis work flow
- Presented at two conferences and published a paper

Chatbot Developer   **United Wardrobe, Remote**
python • DialogFlow   *April 2018–October 2018*

Developed a prototype of a Dutch-speaking customer support chatbot.

NLP Engineer   **NCEM, Moscow**
python • machine learning • Sklearn • NER • web-crawling • databases   *August 2016–August 2017*

Core member of AI development team working full-time on building a social media monitoring system.
- Built several domain-specific text classifiers
- Developed an annotation work flow and guidelines
- Developed news content-based clusterisation system
- Improved Named Entity Recognition
- Worked on key word extraction

Junior Web Developer   **TT-Consult, Remote**
HTML • PHP • SEO • web crawlers   *June 2014–August 2016*

Editing content, debugging code, re-designing the website and doing Search Engine Optimisation.

Education

Masters of Artificial Intelligence   **Nijmegen, Netherlands**
Radboud University   *2017–2019*

Bachelor of Computational Linguistics   **Moscow, Russia**
National Research University Higher School of Economics   *2013–2017*

Exchange student, Computational Linguistics   **Helsinki, Finland**
University of Helsinki   *2015–2016*

Skills

- **Programming Languages:** Python
- **Chatbots:** Rasa, DialogFlow, ManyChat, LUIS
- **Web-development:** HTML, CSS, JavaScript, Flask, Scrapy, Django
- **Data annotation:** Prodigy, Toloka, Tagtog, Snorkl
- **Databases:** BigQuery, MySQL, SQLite, MongoDB, PostgreSQL
- **Data visualisation:** DataStudio, ChartJS
- **ML and NLP:** SpaCy, NLTK, pandas, gensim, Sklearn, TensorFlow, WEKA
- **Word embeddings:** Word2Vec, FastText, MUSE, VecMap
- **Other:** LaTeX, Jupyter Notebook, git, bash, Linux, luigi
- Sentimental Analysis, Chatbots, Word sense disambiguation (WSD), Topic modelling, Named Entity Recognition (NER), Web-crawling, Text classification and clusterisation, Duplicates detection, Sequence labelling, Information Retrieval

Projects

- **Resume Chatbot** [Link] The chatbot answers simple interview-like questions about me. Built with Python,

Flask and DialogFlow.
o **Web app for practising Russian** Web app that automatically generates language tests for practising Russian. Built with Python and Flask.

Academic experience

Conferences

o **PyData Amsterdam [Video]**   **Amsterdam**
"How to expand your NLP solution to new languages using transfer learning"   *May 2019*

o **CLIN29 Conference**   **Groningen**
"Best practices for learning domain specific cross-lingual embeddings"   *January 2019*

o **Conference ConCort on Digital Humanities**   **Nizhnyj Novgorod**
"Instruments of Quantitative Typological Research"   *October 2016*

Publications

o **Best practices for learning domain-specific cross-lingual embeddings, 2019** [Link]
Shakurova L., Nyari B., Li C., Rotaru M.
Proceedings of Repl4NLP workshop, ACL conference
o **Universal Dependencies for Russian: A New Syntactic Dependencies Tagset, 2016** [Link]
Lyashevkaya O., Droganova K., Zeman D., Alexeeva M., Gavrilova T., Mustafina N. and Shakurova E.

Additional Information

Language Skills

o **Native:** Russian
o **Advanced:** English (C1 CEFR Level, CAE)
o **Intermediate:** German, Dutch (B1-B2)
o **Basic:** Spanish, Finnish, French

Awards

o **Orange Tulip Scholarship Russia** 2017 awardee
o **T500 2018 2021** - list of 500 most talented young people in the Dutch digital scene

Extra activities

o **President of Language Exchange Committee**, ISN Nijmegen, 2017 - 2018

Interests

Travelling · Music · Psychology · Literature