

# Toni Kukurin

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## Experience

- from 07/2019 to 10/2019 **Software Engineer Intern**, Google Lens, Zürich.
- Surveyed the relevant SOTA in font style detection from raw images
  - Devised a labeling scheme focused on unique project specs and re-use of existing datasets
  - Collaborated across teams to leverage internal efforts on synthetic dataset generation (*C++*)
  - Implemented a user-friendly front-end for efficient image labeling (*JavaScript*)
  - Implemented and evaluated performance of a stacked autoencoder ML model (*TensorFlow*)
  - Researched and implemented an automated contrast adjustment algorithm (*C++ back-end*)
- from 04/2019 to 07/2019 **Applied Science Intern**, Microsoft NLU Group, Redmond.
- Adapted BERT for joint intent classification and slot filling in conversational NLU (*PyTorch*)
  - Collected, analyzed, and cleaned a large conversational multi-turn dataset (*SpaCy*, *NLTK*)
  - Devised experiments and implemented hand-crafted features to evaluate transfer learning in the Snorkel weak supervision framework, focusing on the cold start problem (*SKLearn*, *NLTK*)
  - Leveraged relevant findings to advise part-time on a separate definition mining project
- from 10/2018 to 04/2019 **Research Intern, Part-time**, TakeLab, Zagreb.
- Implemented and evaluated different active learning domain adaptation approaches (*SKLearn*)
  - Analyzed & vastly improved the quality and performance of a large legacy codebase (*Python*)
  - Maintained a production-grade ML model: serving, data collection & storage (*Django*, *React*)
  - Facilitated hand-off by writing well-documented research code and an extensive knowledge base
- from 07/2018 to 10/2018 **Software Engineer Intern**, Microsoft Office 365, Redmond.
- Collaborated with a small agile team to scope out initial project requirements
  - Architected & implemented back-end logic for a network topology builder service (*C#*, *Azure*)
  - Implemented bugfixes for an internal *C#* microservice framework
- from 02/2018 to 07/2018 **Freelance Software Engineer**, Remote.
- Devised unique solutions for a broad clientele, spanning from minor Python scripts to performing as the lead back-end developer on mid-scale software projects
  - Examples include maintaining a payment processing *NodeJS* service, coming up with efficient data transformation algorithms for a *Django*-based ETL pipeline, devising and implementing a smart algorithm to create Lego objects based on 3D geometry definition files
- from 07/2017 to 02/2018 **Software Engineer Intern**, Google Play, London.
- Architected and implemented complete features on the Google Play back-end, focusing on delivering well-documented and thoroughly tested code (*Java*)
  - Implemented auto-update management and per-device app access policies for managed Play
  - Collaborated across teams to translate business goals of an open-ended WebAPK project and to architect a PoC within the constraints of Google's infrastructure
- from 07/2016 to 10/2016 **Software Engineer Intern**, InfoBip, Zagreb.
- Built a PoC for the Facebook Messenger service from the ground up (*Spring Boot*)
  - Implemented new features for various greenfield company projects (*Java*)
  - Stress-tested production-ready services & proposed fixes for discovered bottlenecks (*JMC*)
  - Discovered and fixed a major resource leak in production

## Research Papers

- 2018 **Personalized Medicine: Redefining Cancer Treatment**, In Proceedings of Text Analysis and Retrieval course at FER.
- 2017 **Classification Experiments for Answer Retrieval in Community QA**, In Proceedings of SemEval 2017.

## Education

- 2017–2020 **MSc in Computer Science**, FER Zagreb.  
*Structured Deep Learning With Graph Neural Networks*
- 2014–2017 **BSc in Computer Science**, FER Zagreb.  
*Claim and Stance Classification in Online Discussions Using Machine Learning*

## Skills

- Languages Python, Java, TypeScript, C#, C++, HTML, CSS
- Tools Git, Linux, Vim; NumPy, SKLearn, PyTorch, Django, NodeJS, Spring