# Lucas DRUART

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# PhD student passionate about Artificial and Natural Intelligence currently focusing on Spoken Language Understanding.

## Education

2021 - 2024 Philisophiae Doctorate, Université d'Avignon.

Research on End-to-End Spoken Language Understanding systems for Task-Oriented Dialogues.

- Designing a contextual structured semantic annotation scheme for task-oriented dialogue dataset.
- Ranking 1st in the "Speech Aware" Dialogue State Tracking Challenge (DSTC11).
- o Communicating results in top-tier conferences (ACL, InterSpeech).
- 2019 2021 M.Sc. in Industrial and Applied Mathematics, Université Grenoble Alpes.

Majors: Advanced statistics, Bayesian inference, Combinatorial optimization, Information retrieval and visualization,

Minors: Financial assessment, Marketing

2018 - 2019 Bachelor's degree, Grenoble INP - ENSIMAG, Grenoble.

Majors: Cybersecurity, Data structures, Language Theory, Operations research and Statistics

Minors: Economy, Innovation management

2016 - 2018 Preparatory classes, Champollion, Grenoble.

Intensive two year preparation for the national competitive exams to join Engineering Schools.

# Experience

2021 - 2024 PhD Thesis, Orange.

Contributing to the expertise of the multimedia content processing team.

- Sharing outcomes of my research and discussing their production applicability.
- o Performing benchmarks of different libraries and models.
- Mars Sept Research internship, Orange.
  - 2021 Behavioral analysis of social media recommendation systems and polarization simulation.
- Juin Sept Data Science internship, Homiwoo.
  - Building a visualisation platform to better understand the biases in deep learning models predicting real estate prices. 2020
- Fev Mars Kaggle Challenge.
  - 2020 NLP tweet classification model for disaster detection.
- Janvier 2020 Projet Génie Logiciel, Grenoble INP ENSIMAG.

Building a compiler for a subset of Java with four other students.

#### Skills

## Programming

- o Full competency: Python Machine Learning (Numpy, Pan- o Languages: Fluent in both English and French, German and das, scikit-learn, Keras, PyTorch) and visualization (seaborn, plotly, altair), R
- Partial competency: Bash, Java (standard libraries), C++ Office software: LATEX, Microsoft suite, Gsuite (standard libraries and Qt), C, Docker, Slurm
- Basic competency : Matlab, SQL

#### Workplace

- Spanish basics
- Soft skills : Open-mindedness, rigor and communication
- Organisation: Trello and Jira basics
- o Development: Unix, Git, Jupyter, JetBrains, Rstudio and Visual Studio Code

### Hobbies

Sports Rugby (National tournaments between 14 and 20 y.o.), ski, snowboard, windsurf, kitesurf and Water-Polo

Travels Austria, Belgium, Cuba, Germany, Greece, Italy, Morocco, Norway, Portugal, Spain, United States

Expatriation Madagascar (3 years), South Africa (3 years), United Kingdom (1 year)

Epistemology Developing my critical awareness