



Biagio Distefano

✉ Email: me@biagiodistefano.io 🌐 Website: <https://www.linkedin.com/in/bdles/>

🌐 Website: <https://biagiodistefano.io>

🌐 Website: <https://github.com/biagiodistefano>

Date of birth: 09/09/1992 **Nationality:** Italian

ABOUT ME

I'm a **Senior Python Developer** coming from the **Blockchain** and **Legal-Tech** world; I've also worked in **eHealth**, then I worked with **LLMs** in the commercial insurance sector, and finally got back to **Blockchain** and **Web3**.

My greatest professional focus is to acquire a wide range of interdisciplinary skills in order to combine them, gain new perspectives and invent new solutions to all sorts of problems. My background is in legal automation, **AI** and **DLTs**: I'm both a jurist – with a deep education in Italian and European Law – and an all-rounded programmer, with experience in **AI & Law**, **Smart Contract development**, **eHealth** and **LLMs**. Now, back to **web3**.

WORK EXPERIENCE

[10/2024 – Current] **Senior Backend Developer**

Keyring.network

Country: United Kingdom

Development of **Web3** applications; microservice back-end; junior mentoring.

- Sr. Software Engineer in the backend team
- Rewriting the backend from **FastAPI** and **Flask** to **Django**

[04/2024 – 09/2024] **Senior Software Developer**

Cytora

City: London | **Country:** United Kingdom

Development of **LLM** based applications; microservice back-end.

- Sr. Software Engineer in the **LLM** team
- Developed a bunch with **FastAPI**, **AWS**, **PostgreSQL** and Redis
- Re-engineered the entire architecture of the **LLM** service to make it run on 100mb of RAM

[12/2022 – 03/2024] **Senior Python Developer**

Black Tusk GmbH

City: Wien | **Country:** Austria

Development of **eHealth** applications based on the **FHIR** standard; coaching and mentoring Jr. developers.

- Development of **FastAPI** and **Django** FHIR server;
- Development of FHIR-search engine with **Neo4j**'s graph database;
- Development of core **FHIR** libraries;
- Unit testing and integration testing;
- Development and design of product architecture;
- **Docker** & co.
- Managing **PostgreSQL**
- Managing **Neo4j**

- **Celery, Redis** and whatnot
- CI/CD with Azure devops

[10/2021 – 11/2022] **CTO**

Sweet Legal Tech srl

City: Milan | **Country:** Italy

Single out technologies and supervise development of legal automation tools for law firms and companies

[07/2019 – 11/2022] **Senior Python Developer**

Law Engineering Systems srl

City: Siena | **Country:** Italy

Project management; supervision of product development; partner engagement. Coding like there's no tomorrow.

Main activities managed, supervised or developed:

1. Development of data aggregators for legal knowledge
2. Development of data parsers for legal documents
3. Development of core libraries
4. Development of **Django** REST APIs
5. Development of microservices with **FastAPI**
6. Managing **PostgreSQL, Neo4j, Elasticsearch, Meilisearch, Redis**
7. Development of **FTS** engine
8. Development of **NLP** tools for legal language
9. Data mining of legal knowledge
10. Development of custom **DLT** solutions using **web3** and **solidity**

Research Associate - Marie Skłodowska Curie Actions (MSCA) Early Stage

[31/10/2019 – 29/09/2021] **Researcher (ESR)**

University of Vienna • University of Bologna • University of Torino

City: Vienna | **Country:** Austria

Doctoral student in the Law, Science and Technology Joint Doctorate – Rights of Internet of Everything (LAST-JD-RIoE) (Horizon 2020 Marie Skłodowska Curie Actions Innovative Training Network European Joint Doctorate) program, researching the topic: *DLTs beyond financial applications: eDemocracy and new forms of governance*

[30/09/2018 – 29/09/2019] **Research Fellow in Legal Informatics / Python developer**

CIRSFID - University of Bologna

City: Bologna | **Country:** Italy

Development of API infrastructure with Django and Flask for all of the following projects.

Legal documents automated analysis, parsing and xml structuring in various projects such as:

- LexDatafication: Italian Government's Cabinet, State Mint, Constitutional and Cassation Court project for automated legal documents parsing, data extraction, analysis and Akoma Ntoso markup for Italy's legislative and judiciary documents
- Formex2AKN: project for automated conversion of legal and judiciary documents from EU's EurLex and CELLAR's fmx4 to Akoma Ntoso xml
- SANKOFA: Challenge for the United Nations: machine learning-based data analysis and extraction, markup and conversion of UN's resolutions into Akoma Ntoso xml, for text classification and ontology extraction (1st price)

[30/09/2015 – 29/06/2016] **Lawyer trainee**

Avv. Mirko Mecacci

City: Siena | **Country:** Italy

[30/05/2015 – 29/06/2016] **Board Member**

MondoMangione soc. coop.

City: Siena | **Country:** Italy

- Legal Advisor
- Internal Audit

EDUCATION AND TRAINING

[31/10/2019 – 04/2024] **PhD student in Law, Science and Technology (interrupted)**

University of Vienna

Field(s) of study: Law and technology | **Level in EQF:** EQF level 8 | **Thesis:** DLTs Beyond Financial Applications: eDemocracy and New Forms of Governance

[02/2019 – 04/2019] **Blockchain Specialization**

State University of New York - University at Buffalo (via Coursera.org)

[31/10/2015 – 06/06/2017] **Specialization Degree in Legal Professions**

School of Specialization for Legal Professions - University of Siena

City: Siena | **Country:** Italy | | **Level in EQF:** EQF level 8

[30/09/2010 – 15/07/2015] **Master's Degree in Law**

University of Siena

City: Siena | **Country:** Italy | **Field(s) of study:** Law | **Final grade:** 110 cum laude | **Level in EQF:** EQF level 7 | **Thesis:** Corporate criminal liability in corporate groups

LANGUAGE SKILLS

Mother tongue(s): Italian

Other language(s):

English

LISTENING C2 READING C2 WRITING C2

SPOKEN PRODUCTION C2 SPOKEN INTERACTION C2

German

LISTENING B1 READING B1 WRITING A2

SPOKEN PRODUCTION A2 SPOKEN INTERACTION A2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

My Digital Skills

Python - General

Python3 | REGEX | requests | PEP8 | aiohttp | AWS Boto3 | Async / Await | Recursive Programming | multiprocessing | peewee | ORMs | Psycopg2 | SQLAlchemy | tqdm | virtualenv | logging | Pydantic | alembic | object-oriented programming | Sphinx | Typing | mypy | poetry | Unit Testing | pip | ruff

Python - Backend

Django | FastAPI | Flask | GraphQL | JWT | OpenAPI | Django REST Framework | Nginx Web Server | REST | Microservices | OAuth2

Python - NLP

SpaCy | Prodigy | Gensim | word2vec

Databases

eXistDB | Redis | MongoDB | ArangoDB | Neo4j | SQLite | PostgreSQL

Blockchain and DLTs

Ethereum | IPFS | Truffle | Smart Contracts | Solidity | web3

Other

Linux | HTML5/CSS, Javascript | Akoma Ntoso | XML | CI | Git | AWS | Docker

LLMs

OpenAI | Anthropic | Gemini | Llama

HONOURS AND AWARDS

[09/2023] **Best Paper Award - ICEGOV 2023, for the paper "Aligning UN Goals and Legal Norms in a Case Weighting System: A Case Study on Environmental Crimes in Italy"**

Awarding institution: ICEGOV

[16/06/2019] **First Place - UNGA Resolution Challenges (SANKOFA - Unite Ideas) Awarding institution:** United Nations

Development of a python-based legal-informatics software

[03/2015] **Finalist - National Moot Court Competition Awarding institution:** ELSA Italy

PUBLICATIONS

[2019] **Democracy Through the Blocks: Towards the Era of Law Engineering**

[2020] **MOATcoin: Exploring Challenges and Legal Implications of Smart Contracts Through a Gamelike DApp Experiment**

[2021] **A Dataset for Evaluating Legal Question Answering on Private International Law**

[2023] **Aligning UN Goals and Legal Norms in a Case Weighting System: A Case Study on Environmental Crimes in Italy**

VOLUNTEERING

[02/2021 – 04/2022] **Tech expert - Develawpers**

Tech coaching and teaching coding to legal professionals

[31/07/2016 – 30/07/2017] **Director Internal Management - ELSA Siena**

[11/2014 – 06/2017] **Volunteer - Italian Red Cross**