

# SISSY THEMELI

## Senior Software Engineer

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### SUMMARY

Software Engineer with 7+ years of experience building backend systems and APIs, mostly in tech startups. I'm passionate about efficient system architecture and design, discovering software development best practices, writing clean, reusable and well-tested code as well as helping my team follow these practices in our codebase. As a senior engineer in my last few roles, I've coached and onboarded junior engineers and organized reading groups to share knowledge within engineering teams. I work best in environments that value emerging technologies and experimentation, where I can continue to improve my technical and leadership skills.

### EXPERIENCE

#### Senior Software Engineer

📍 [Unitary](#), London, UK

📅 06/2022 - today

*Unitary is an online content moderation company developing AI solutions to help online platforms detect harmful content*

- Redesigned and implemented a decoupled architecture of the backend microservices with a cross-functional team to make the system more resilient and use resources more efficiently
- Improved development and deployment processes in our monorepo: introduced feature flags, improved unit and integration tests, eliminated tech debt and enhanced CI/CD pipelines. This resulted in better ability to deliver daily releases to production safely
- Designed and implemented the Virtual Moderator product of the company by using LLM & VLM models, which minimized the need for human moderation, reduced costs and increased speed of customer service
- Helped the Machine Learning team standardize and automate their processes, by introducing ML pipelines and workflows that interact with our backend systems
- Organized reading groups to enable knowledge sharing within teams and across the company
- **Tech stack:** Python, FastAPI, Django, BentoML, Go, Redis, PostgreSQL, RabbitMQ, AWS SQS/SNS, Docker, Kubernetes, AWS, GitHub Actions, Grafana, Prometheus, InfluxDB, Datadog, Prefect

#### Senior Software Engineer | Tech Lead

📍 [Linked Business](#), Athens, Greece

📅 04/2021-05/2022

*Linked Business is a FinTech company collecting company data from official state sources and providing B2B sales leads and KYC services to its customers*

- Designed the system's architecture from scratch and organized the code base in microservices
- Led end-to-end design, planning, and implementation of the KYC Report, a core company product
- Trained and mentored a team of 4 Junior engineers. Prepared training material and helped with onboarding new team members
- Collaborated closely with ML engineers to revamp the company name matching project and build automated pipelines that increased algorithm accuracy
- **Tech stack:** Python, FastAPI, Django, RabbitMQ, MySQL, Redis, Docker, Kubernetes, AWS EKS, GitLab CI/CD, ArgoCD, Grafana, Prometheus, Airflow

#### Senior Software Engineer | Researcher

📍 [NCSR Demokritos](#), Athens, Greece

📅 09/2019 -09/2021

*NCSR Demokritos is the biggest research center in Greece with state-of-the-art research on the areas of AI and Machine Learning as well as in Telecommunications*

My projects included:

- **DARE Project:** Developed an intermediary platform bridging scientific applications and underlying computing resources, using Kubernetes, MPI parallel programming and microservices.
- **DebateLab:** Led the development of an advanced Argument Mining system tailored for Greek news articles, providing a nuanced understanding of linguistic structures to extract insights for argumentation analysis
- **FAIR4Fusion:** Developed a platform democratizing European-funded data for the fusion community, which I integrated with the DARE platform on the backend to extract useful data analytics
- **Tech stack:** Python, Flask, Django, Docker, Kubernetes, flairNLP, PyTorch, transformers, MPI, dispel4py (workflows)

#### Software Engineer

📍 [VoiceWeb](#), Athens, Greece

📅 08/2018-08/2019

*VoiceWeb develops voice bots and chatbots using AI technologies*

- Architected and implemented a range of voice applications, using the core product (Dialog Manager)
- Implemented multiple features and enhancements across the core company's products resulting in better customer satisfaction

### SKILLS

#### Programming

[Python](#) ( [FastAPI](#) [Django](#) , [Flask](#) )

[Java](#) ( [Spring Framework](#) [Java EE](#) )

[Go](#) [Bash](#) [R](#)

#### DevOps & CI/CD

[Docker](#) [Kubernetes](#) [ArgoCD](#)

[GitLab CI/CD](#) [GitHub Actions](#)

#### MLOps

[Prefect](#) [Airflow](#)

#### DBs

[PostgreSQL](#) [MySQL](#) [Oracle SQL](#)

[Redis](#) [MongoDB](#)

#### Message Brokers

[RabbitMQ](#) [AWS SQS/SNS](#)

#### Logging & Monitoring

[Sentry](#) [OpenTelemetry](#) [Grafana](#)

[Prometheus](#) [InfluxDB](#) [Datadog](#) [ELK](#)

#### ML Libraries

[transformers](#) [NumPy](#) [Pandas](#)

[pytorch](#) [scikit-learn](#)

#### Operating Systems

[Linux](#) [Mac](#) [Windows](#)

### LANGUAGES

English

French

Greek



### TRAINING/COURSES

- [Modern Application Development with Python on AWS](#), Coursera, 09/2022
- [AWS Fundamentals Specialization](#), Coursera, 06/2022
- [Go Design Patterns](#), LinkedIn Learning, 06/2022
- [Programming with Google Go Specialization](#), Coursera, 06/2022
- [Building Containerized Applications on AWS](#), Coursera, 11/2021

- Led the redesign and implementation of the Dialog Manager, transitioning from a monolithic application to a microservices architecture
- Replaced the outdated dialog rules parsing system from XML files by introducing a robust Rule Engine using MongoDB, improving efficiency, maintenance, and adaptability in managing dialog rules
- **Tech stack:** Java, Spring, Hibernate, GitLab CI/CD, PostgreSQL, MySQL, MongoDB

## Software Engineer

📍 [GNT Information Systems](#), Athens, Greece

📅 10/2017 - 07/2018

*GNT develops various software solutions for its clients (SchoolBusNotes, Ericsson etc)*

- Developed the complete backend of a school bus routing system
- Developed and implemented a K-means clustering algorithm to dynamically group nearby store locations on a map, adjusting clusters based on zoom level for improved visualization
- Implemented a test-driven approach to increase the test coverage of the code base
- Participated in UI projects using Vaadin and Android frameworks
- **Tech stack:** Java EE, Spring, EJB3, SOAP, REST, JUnit, Arquillian, Vaadin, Android

## EDUCATION

### M.Sc. in Computer Science

📍 [Dep. of Informatics, University of Athens](#)

📅 10/2016-10/2018

Thesis: Hate Speech Detection using different text representations

### B.Sc. in Management Science & Technology

📍 [Athens University of Economics and Business](#)

📅 10/2008-12/2013

## CONFERENCES/SEMINARS

- Artificial Intelligence for Multilanguage Services for Citizens and Businesses, ELRC workshop (virtual event, 15/12/2020)
- Using text data to improve causal analyses of electronic health records (speaker: Dr. Aaron Kaufman, place: NCSR Demokritos, date: 7/11/2019)
- 1st Athens NLP Summer School (place: NCSR Demokritos, dates: 18-25/09/2019)
- 20th International Conference on Computational Linguistics and Intelligent Text Processing (CICLing2019, place: LaRochelle France, dates: 7-13/04/2019)
- Object-Centric Machine Learning (speaker: Leonidas Guibas, place: Department of Informatics and Telecommunications, date: 5/5/2017)

## PUBLICATIONS

Dare platform: a developer-friendly and self-optimising workflows-as-a-service framework for e-science on the cloud

👤 Iraklis A. Klampanos, **Chrysoula Themeli**, Alessandro Spinuso, Rosa Filgueira, Malcolm Atkinson, André Gemünd, and Vangelis Karkaletsis

📅 2020

📖 Journal of Open Source Software

🔗 [joss](#)

A study of text representations for Hate Speech Detection

👤 **Chrysoula Themeli**, George Giannakopoulos, Nikiforos Pittaras

📅 2023

📖 Springer Nature Switzerland

🔗 [springer](#)