# SISSY THEMELI

## Senior Software Engineer

 @sissythem   Sissy Themeli

## 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

## 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, MalcolmAtkinson, 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