

Giannis Papaioannou

Senior Python Developer

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Summary

Senior Software Engineer specializing in Python, with expertise in building scalable systems and solving complex technical challenges. Engineered robust solutions for data pipelines and distributed applications, maintaining reliability through continuous refinement. Eager to continuously expand technical knowledge and apply innovative approaches to advance engineering practices and team goals.

Experience

Vermantia, Marousi - Athens

AUGUST 2018 – PRESENT

SENIOR SOFTWARE ENGINEER

- Designed and built Vermantia's custom digital-signage platform, including a Django-based CMS, a Python/FastAPI agent, and a packaging pipeline. Integrated low-level OS components and video-stream handling with window managers to support scalable, multi-screen content distribution.
Key technologies: *Python, Django, Celery, FastAPI, RabbitMQ, GObject, GStreamer, WebKit and Wayland.*
- Transitioned deployment strategies to *Kubernetes*, eliminating the need for night-time deployments while ensuring reliable, seamless releases.
- Designed and delivered end-to-end full-stack systems for OPAP's sports and racing channels, leveraging *Django* and *FastAPI* on the back end and *React* on the front end. Ensured continuous availability and seamless high-traffic user experiences by integrating live streaming and real-time data pipelines.
- Transitioned a *.NET*-based microservice ecosystem that ingested data updates and routed them to clients according to contractual rules into a *Python* stack using *Django* and *Celery* pipelines, streamlining development and improving scalability.

SOFTWARE ENGINEER

- Developed and sustained an automated video-stream orchestration platform using *Django* and *Celery* workers, eliminating the need for manual operational intervention.
- Optimized a *Scikit-learn*-based machine-learning service that links sports and racing events to live streams, continuously boosting prediction accuracy.
- Designed and rolled out an organization-wide logging platform, employing *Loki* for log aggregation and *Grafana* for unified visual dashboards, to provide real-time system-health monitoring across all teams.
- Re-architected legacy microservices into a fault-tolerant framework, markedly improving system stability and reliability.

Skills

Languages: Python, TypeScript, Javascript, Golang, Java, PHP, Bash

Backend Frameworks: Django, FastAPI, Flask, Celery, SQLAlchemy, NextJS

Frontend Frameworks: NextJS, React, NodeJS, jQuery

Devops & Infrastructure: Docker, Kubernetes, Terraform, Ansible, Gitlab-CI

Databases & MQ: PostgreSQL, MongoDB, RabbitMQ, Redis, Memcache

Testing & Development Practices: Git, TDD, Unittests, Integration tests

Operating Systems & Virtualization : Ubuntu, Debian, Proxmox, QEMU, HyperV

Networking: Caddy, Traefik, DNS, Wireguard

Education

- BS University of Piraeus**, Department of Informatics - Digital Systems SEPT. 2014 – SEPT. 2019
- **Thesis:** PARALLEL EXECUTION OF REVERSE TOP-K QUERIES IN MAIN MEMORY. [PDF](#)
- Conducted original research on optimizing reverse top-k queries through parallel processing in main memory, designing a parallel processing framework and programmable API to advance query efficiency in distributed systems, demonstrating scalable performance gains over single-threaded approaches.

Certifications

- TypeScript:** Understanding TypeScript FEBRUARY 2026 [Certificate](#)
- Ansible:** Ansible for the Absolute Beginner - Hands-On - DevOps FEBRUARY 2026 [Certificate](#)
- Kubernetes:** Learn DevOps: The Complete Kubernetes Course APRIL 2024 [Certificate](#)
- Terraform:** AWS Infrastructure as Code With Terraform OCTOBER 2022 [Certificate](#)

Projects

- Homelab** ONGOING
papaioannou.dev
- In my spare time, I've been developing a Homelab project that operates on a Proxmox cluster. This showcases my skills in designing, implementing, and managing complex systems and infrastructure. The cluster hosts various open-source services that I utilize daily.
 - **Technologies used:** Proxmox, Wireguard, Vaultwarden, Immich, Adguard, Open-WebUI, Ghost
- Warden IP tracker** OCTOBER 2022
 [warden](#)
- Containerized agent that monitors dynamic IP changes and sends real-time notifications via Discord webhooks.
 - **Technologies used:** Python, Docker
- Steward** NOVEMBER 2020
 [steward](#)
- A Docker-based service that assesses network speed and latency.
 - **Technologies used:** Python, Docker, InfluxDB
- Scarletmoon** AUGUST 2018
 [scarletmoon](#)
- A service that creates inverted indexes to facilitate efficient text searching without needing predefined document structures.
 - **Technologies used:** Python, Nameko
- All Pay Auction** FEBRUARY 2018
 [allpayauction](#)
- This is a university project for the algorithmic trading course. It involves implementing an iterative best response method, determining the optimal move by taking into account the actions of other bidders.
 - **Technologies used:** Python, Matplotlib
- Flamel** JULY 2017
 [flamel](#)
- Graphical interface showcasing different path-finding algorithms.
 - **Technologies used:** Java