

NIKOLAOS ZOROS

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[LinkedIn](#) | [Github](#) | [Portfolio](#)

Technical Skills

Programming Languages: JavaScript, HTML, CSS, Python, SQL, C++, C, Matlab, MongoDB, PostgreSQL.

Technologies/Frameworks: React.js, Next.js, Express.js, Redux, Node.js, Git, REST APIs, Django, Tailwind.

Developer Tools: Visual Studio Code, Android Studio, MySQL, GitHub, GitLab, Postman API, Figma.

EXPERIENCE & PROJECTS

Full-Stack Developer || Lost & Found App.

(still in development)

React.js, Tailwind, TanStack, Express.js, MongoDB, Mongoose, WebSockets, Firebase, Redis, OpenAI API.

- Developed a Full-Stack missed connection matching app, allowing users to post sightings with descriptions and location data.
- Built a **RESTful API with Node.js and Express.js**, utilizing **MongoDB and Mongoose** for structured data management and efficient queries.
- Integrated **AI-powered matching** using **OpenAI's GPT API** to analyze user descriptions and **Faiss vector search** for similarity-based recommendations and designed an intelligent matching algorithm that connects users based on self-descriptions and preferences.
- Implemented **WebSockets** for real-time updates, ensuring seamless interactions and instant match notifications.
- Used **Firebase Cloud Messaging (FCM)** for push notifications, alerting users when a potential match is nearby.
- Optimized performance with **Redis caching** and **Redis vector search** for fast AI-powered recommendations.

Database Administrator of Directorate of Academics Department in Greek Military

Python, Visual Basic, SQL, WordPress, Data Analysis

- Administration and enhancement of the Database (MS Access) and military Information System for facilitating the preliminary exams of HMACSO, Data Collection/Cleansing and Validation of the Candidates.
- Querying and Notifying the validated candidate students of SMEI (Senior Military Education Institution)-SMNCOI (Senior Military Non-Commissioned Officer Institution) via SQL Queries and Python automations/scripts.
- Efficiently arranging and administering the Preliminary Exams for candidate students of SMEI-SMNCOI. This includes daily result export, maintaining communication with representative committees and promptly resolving any issues that arise in real time.
- Inputting, editing, and publishing the examination results on the Academy website using the WordPress content management system.

Data Analysis of R Questions and Topics Using Natural Language Processing Techniques of StackOverflow

Python, Latent Dirichlet Allocation, NLP (spaCy), Name Entity Recognition, FastAPI, Pandas, Matplotlib

- Conducted comprehensive data collection of over 400,000 questions tagged with "R" on StackOverflow using the StackExchange API, utilizing pagination to store the data in a CSV format.
- Performed data cleaning and pre-processing in Python, including deduplication of questions and removal of incomplete or irrelevant entries, ensuring the dataset was optimized for training purposes.
- Applied advanced Natural Language Processing (NLP) techniques, utilizing the SpaCy library for Named Entity Recognition (NER) and implementing the Latent Dirichlet Allocation (LDA) algorithm for topic modeling.
- Employed the pre-trained word2vec Google News vectors for word embedding, adding a new "topic" field to the CSV file for enhanced analysis and categorization.
- Processed and analyzed data efficiently using Pandas, enabling seamless exploration of patterns and insights.
- Produced compelling visualizations with Matplotlib to present trends, distributions, and the prevalence of key topics, facilitating better interpretation and communication of findings.

Education

- **Bachelor of Computer Science at Aristotle University of Thessaloniki.**

Relevant Coursework: OOP in C++, Data Structures, Algorithms, Software Engineering, Database Systems, Computer Systems, User Interface Design, Applied Statistics, Linear Algebra, Discrete Mathematics

- **Responsive Web Design**(HTML,CSS) at freeCodeCamp.
- **Javascript Algorithms and Data Structures** at freeCodeCamp.
- **React Complete Course** (incl. Next.js, Redux etc.).
- **Cambridge Proficiency English Certificate**(C2).
- **Qualified teacher/educator at Aristotle University of Thessaloniki.**
- First Aid/CPR Certification