

Paul Capobianco, Ph.D.

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SUMMARY

Backend developer with 3 years of experience using Python (Django, FastAPI, Flask), NodeJS (Express, Mongoose), and NextJS building scalable web applications for SMEs. Additional background in UX research, UI design, and a range of frontend technologies.

DEVELOPMENT

Python (Django, Flask, FastAPI) • Golang • JavaScript (Svelte, NodeJS, React) • ExpressJS • SQL (MySQL, PostgreSQL, SQLite) • NoSQL (MongoDB, Firebase) • TypeScript • Selenium • Git • RESTful APIs • Docker • OAuth2 • JWTs • Pytest • Insomnia • Tailwind

PROJECTS

Asian Ethnology Database: Built a secure and scalable MERN stack application for an academic journal, featuring a searchable database, interactive frontend UI, and security measures, including validation, sanitization, and rate limiting. Refactored and deployed on Netlify.

CalculateVisa.com: Developed and deployed an improved version of the European Commission's Schengen Visa Calculator with React, TypeScript, and NodeJS, providing a better UI experience and a RestAPI to access visa and safety data scraped from US DoS website.

Phlint: Implemented user authentication and authorization with OAuth2.0, JWTs, and email sign-up using Python Social Auth and Redis for a photo-sharing application.

EXPERIENCE

Backend Developer, Phlint — Apr 2024-Present

- Developed backend RESTful API to allow users to sign up for using Google or email addresses using Google OAuth and SocialPy
- Coded token management on both backend and frontend using SimpleJWT, Redis, and HttpOnly cookies, ensuring smooth and secure user onboarding and distinguishing between sign-up methods to direct users accordingly
- Integrated Django backend with AWS3 buckets using Boto3 to efficiently manage and store user content
- Conceptualized app functionality and UI features based on user personas and journey maps

Database Developer, Asian Ethnology — Jan 2024-Present

- Designed and implemented a responsive MERN stack application that allows users to search and retrieve academic articles
- Scraped data from 2300 entries using BeautifulSoup, cleaned and processed data, and stored them in a MongoDB database
- Developed a RESTful API with NodeJS and Express to handle search queries and data retrieval, implementing input validation and sanitization to protect against NoSQL injection and XSS attacks
- Designed a UI interface with React and Tailwind, allowing users to easily search articles and view results in a responsive table
- Implemented security measures to sanitize data with DOMPurify, validate input with Joi, and rate limit to mitigate potential security risks
- Refactored application to work as a frontend-only solution using JSON data, maintaining security, functionality, and appearance

Data Engineer, Klarner Politics — Aug 2023-Jan 2024

- Created algorithms and scripts to scrape over 100,000+ records of US Congress representatives from dynamic web pages using Selenium and Scrapy, scraping pages with challenging code, such as AJAX calls and JavaScript-rendered content
- Developed a web app using Flask, SQLAlchemy, and React to visualize data and identify insights and patterns from datasets
- Developed spiders and crawlers to locate links, text, and other content, optimizing scraping for efficient and accurate extraction
- Used extracted data to produce comprehensive reports for clients and stakeholders, highlighting significant changes in Congressional composition, tailored to meet specific client needs

Web Developer, Sairae — Oct 2022-Aug 2023

- Developed responsive full stack website prototypes iteratively using React, Django, and Flask based on Figma and PSD designs, creating over 30 website mockups and wireframes to adapt to evolving UI features and app functionality
- Developed backend server and containerized PostgreSQL database using NodeJS, Express, and Docker to store user data for machine learning and data analysis
- Collaboratively developed a relational database schema for an MVP, ensuring data normalization, defining relationships, and optimizing queries for performance and scalability
- Audited Figma files based on UI/UX best practices and heuristics to ensure technical features and designs were optimized for usability, scalability, and performance across platforms

EDUCATION

IBM Back-End Development Professional Certificate — 2024

Scrimba Frontend Developer Curriculum — 2023

University of Iowa, Ph.D., Anthropology — 2019

Seton Hall University, M.A. Asian Studies — 2013

SUNY Potsdam, B.A. Linguistics — 2011