Davide Paci

Software Engineer and BSc CS student from Italy

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EDUCATION

University of Trento   Trento, Italy
Bachelor of Science in Computer Science   *2026*

WORK EXPERIENCE

Software Engineer   July 2024 - Present
Taxcoder   *Remote*

- Developing a platform for Czech freelance accountants using Django framework (Python)
- Implemented E2E testing with Playwright
- Developed chat system using WebSockets, AWS S3 and Redis
- Integrated Celery for intensive/scheduled asynchronous tasks + Flower for task monitoring
- Configured Flower behind secure reverse proxy in production
- Implemented automated testing and containerized CI/CD pipeline
- Reduced CI pipeline times by 22% with dependency caching
- Implemented payments with Stripe Connect
- Feature ownership: designed specification and UX, developed and shipped 4 core revenue-generating features: service marketplace, payment refunds, custom service requests, custom service generation with full test coverage
- Feature flag management
- Test-driven development with integration testing
- Implemented linter pipeline with pre-commit hook linter and formatter, enforcing clean code throughout the codebase
- Secure media storage and delivery with AWS S3 for private chats using pre-signed URLs with caching and thumbnail generation, improving loading times and infrastructure costs
- Paginated chat history system leading to reduced S3 calls and noticeably faster page loading times
- Cron jobs that routinely send re-engagement emails + one-click unsubscribe process
- E2E/integration tests after solving regressions
- Lead generation
- UX and frontends improvements, considerably faster loading times

Software Engineer   July 2024 - December 2024
thinkin   *Trento, Italy*

- In-door map routing system using graphs and Dijkstra/TSP algorithms
- Developed a scalable stateless backend in TypeScript using NestJS
- Optimal path computing using A* algorithm
- Implemented spatial grid indexing using k-d trees
- Validated input data with DTO validation pipes
- Graph storage with MongoDB
- Data cached and stored with Redis using cache-ahead pattern
- Developed live path navigation using Socket.io and Redis
- Containerized services with Docker Compose

Founder   September 2022 - July 2023
Trento Virtual Reality Society   *Trento, Italy*

- Founded a nonprofit organization with the goal of having people discover and enjoy Virtual Reality as a future entertainment medium for free through events and tournaments, reaching a total of 870+ guests present
- Planned events, managed partnerships, marketing and public communications
- Partenered with For Fun Labs (American VR game studio, top sellers on Oculus Store), two local nonprofit organizations (Ludimus, BeYoung) and two university departments (FabLab and Dept. of Engineering, DISI) for sponsored events and one tournament throughout the region
- Mentioned in the daily newspaper "l'Adige" and the Bolzano TV program "Südtirol Heute"

- Instagram of the organization: https://www.instagram.com/trentovrsociety

Software Engineer & Project Manager   December 2021 - February 2022

Cybeur   *Remote*
- Software consultancy firm in Rome
- Tech stack: Node.js, Express, SQL
- Designed specs and deadlines of 2 projects
- Architecture, back-end and unit tests of company document management web app
- Architecture, back-end and unit tests of B2B leasing deals management web app
- Organized sprints via Scrum practices
- All sprint goals reached within deadlines

Software Engineer   October 2020 - December 2021

Fintech Industrial   *Remote*
- Software engineer for startup based in Texas, US
- Tech stack: TypeScript, Express
- Designed and developed a secure User Authentication module (JWT, refresh token AWS S3, MongoDB, email templates) following industry standards including Multi-Factor Authentication (2FA), reset password flow and passwordless authentication
- Designed and developed user notifications API that can be used by any service via events
- Developed payment service (Stripe API) utilized in 2 of the company's platforms
- Implemented dependency injection pattern in services
- Implemented GDPR compliance in microservices

Full-Stack Developer   August 2020 - October 2020

WAE We Are Everything   *Siracusa, Italy*
- Full-stack developer role at event planning company in Sicily
- Web music queue with custom music request (PHP, JS, AJAX)
- Interactive theater SaaS (PHP, JS, Node.js, Socket.io)
- Customizable party quiz game (PHP, JS, AJAX)
- Company landing page (HTML, CSS, JS)

Writer   January 2017 - September 2018

Videogame News Website   *Remote*
- Wrote articles about videogame industry

Founder   August 2016 - June 2020

Online Videogame Community   *Remote*
- Founded an online videogame community wth custom videogame servers
- Over 5.000 members
- Designed and developed game content with the games' scripting languages
- Hands-on experience in marketing, community building, staff recruiting, project management, communication

PROJECTS

Linea 138 | *Python, NumPy, SQLite, Node.js, Express, Tailwind CSS, Galileo AI, EJS*   October 2024
- Web app to easily look up Cosenza's bus timetables and Python scripts to convert a PDF with timetables into a functional database
- Built in 1 day
- GitHub link: https://github.com/davidepaci/linea138

FBDS (Flying Bear Defense System) | *C, microcontrollers*   February 2024
- Co-developed a fully controllable turret for a university course in Embedded Software
- Designed a pan-and-tilt turret system using 3 servos and a Nerf blaster, controlled by a microcontroller
- Added automatic targeting by visual tracking based on OpenCV, using a webcam to detect and track ArUco markers for autonomous operation
- The PC and main MCU communicate via ESP32 microcontroller for automatic targeting
- GitHub link: https://github.com/free-embedded/fbds

NightMove | *Render, Swagger, Node.js, Express, Auth0, Stripe, Lucidchart, Jira, MongoDB* February 2023
- Developed a night bus booking platform for a university Software Engineering course
- Used Stripe API for payments and Auth0 API for user authentication
- Group leader and developer roles following the project through all deliverables
- Continuously integrated team feedback

South Valley Roleplay | *C#, HTML, CSS, JS* November 2020 - April 2021
- Designed and developed UI components for GTA RP server

Polizia.Digital | *PHP, MySQL, HTML, CSS, JS* June 2020
- Recreated Italian State Police website with:
- WYSIWYG blog
- Counterfeit bills checker, stolen goods/documents checker
- Admin panel
- Customizable frontpage gallery
- Automatic blog article publishing on Twitter and Telegram via APIs

ACHIEVEMENTS + EXTRACURRICULAR ACTIVITIES

HackaTUM 2024 | *Hackathon* November 2024 – Munich, Germany
- 4th-place team in CHECK24 challenge

Lead The Future Mentorship | *Mentorship* September 2024 – Remote
- Among the few Italian students selected to be mentees for LeadTheFuture, a leading mentorship non-profit organization for students in STEM, with acceptance rate below 15%
- LeadTheFuture empowers top-performing students to achieve their goals and contribute to their communities by giving them one-on-one guidance from high-impact mentors coming from the world's leading STEM innovation hubs such as Silicon Valley and CERN

Silicon Valley Fellowship | *Fellowship* July 2024 – San Francisco, US
- Program to visit Big Tech companies, academic institutions and attend tech industry networking events and workshops in San Francisco, California
- Accepted into Early Action batch of July 2024 edition
- Decided to defer to next year

Online WordPress + WooCommerce Seminar | *Seminar* February 2022 – Siracusa, Italy
- Online seminar to students of my high school
- Taught students how to setup and customize a basic e-commerce via WordPress and WooCommerce

Experience Abroad November - December 2019 – Dublin, Ireland
- EU-funded project to send top performing students abroad for an English course + certification

Experience Abroad July - August 2019 – St. Julian's, Malta
- EU-funded project to send top performing students abroad for a course on development and configuration of industrial automation systems

LANGUAGES

English: Proficient (C2 Level)
Italian: Native

TECHNICAL SKILLS

Languages: TypeScript, JavaScript, Python, Rust, C/C++, SQL (MySQL/Postgres), HTML/CSS, PHP, Java, Lua, Pawn
Frameworks: NestJS, Node.js, Django, Express, WordPress
Developer Tools: Git, Docker, Redis, MongoDB, GitHub Actions, AWS (S3, EC2), VS Code, Visual Studio, IntelliJ CLion, Eclipse, Code Composer Studio, Swagger, MkDocs, Trello, Jira, Lucidchart, Redis Insight, Postman, Celery, Flower
Libraries: Socket.io, webrtc-rs, Playwright, ws (websockets), Auth0, Stripe, Jest, axios