Luka Diktić

Date of birth: 10/12/2002 | **Nationality:** Croatian | **Phone number:**

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Address: Vjenceslava Novaka 6A, 43000, Bjelovar, Croatia (Home)

WORK EXPERIENCE

SOFTWARE DEVELOPER – INTIS – 01/09/2025 – Current – BUZIN, ZAGREB, CROATIA

- Backend development using **Python** frameworks (Flask, FastAPI)
- **Optimization** of logistics processes for large clients

SOFTWARE DEVELOPER – AXESS CRO – 01/07/2023 – 01/08/2023 – BJELOVAR, CROATIA

- Independently continued development of an internal application built during the previous internship
- Implemented additional features (reporting, categorization)
- **Refactored** existing code
- Responsible for deployment, testing, and project documentation

SOFTWARE DEVELOPER – AXESS CRO – 19/07/2022 – 01/09/2022 – BJELOVAR, CROATIA

Contributed to the development of an internal web application for company operations
Full-stack development using **Angular** (frontend) and **ASP.NET** (backend)
Implemented database access and business logic using **MySQL**
Developed UI, authentication, and admin functionality
Collaborated with the team in an agile environment (**Scrum**)

WAITER/WAITRESS – KEMPINSKI HOTEL ADRIATIC ISTRIA – 01/07/2024 – 01/09/2024 – SAVUDRIJA, CROATIA

- Served guests in a luxury hotel while meeting **high quality standards**
- Worked under pressure in a fast-paced environment with a high volume of guests
- Maintained a high level of accuracy, reliability, and professional conduct
- Communicated with domestic and international guests in Croatian and English
- **Teamwork** and **coordination** with the kitchen and reception/front desk

WAITER/WAITRESS – FALKENSTEINER HOTEL – 01/07/2021 – 01/09/2021 – PUNAT, CROATIA

- First experience in hospitality - learned the basics of waiting service
- Developed **communication** and **problem-solving skills** in stressful situations
- Followed hygiene and workplace standards

PROJECTS

01/04/2024 – 09/06/2024
Final Thesis - Evolutionary Algorithms in 3D Packing

- Independent final thesis project at FER, University of Zagreb
- Developed a genetic algorithm to optimize an **NP-hard** 3D box packing problem
- Simulated and analyzed the performance of **heuristic approaches** in an industrial context (e.g., logistics, warehousing, transport)

- Implemented in Python using tools such as **NumPy** and **Matplotlib** for result visualization
- Documented the algorithm, evaluated results, and compared with classical approaches

Link https://github.com/diki000/3D-bin-packing

01/03/2024 – 01/09/2024
E-commerce Webshop Application (Independent Project)

- Developed a fully functional **webshop** as an independent project
- Implemented a user interface for product browsing, registration, and purchasing
- Integrated card payments via the Stripe API
- Built an admin interface for managing products, orders, and users
- Technologies: **Angular** (frontend), **.NET Core** (backend), **PostgreSQL** (database)
- Deployed the application on a DigitalOcean Droplet with an NGINX reverse proxy setup
- Independently configured security, environment variables, and HTTPS certificate (Let's Encrypt)

01/03/2025 – 25/05/2025
Ranking Optimization - Aggregating Partial Ranked Lists into a Global Ranking

Solved an optimization problem of aggregating partial ranked lists into a single global ranking
Applied and evaluated three different models:
- **TrueSkill** (Bayesian skill rating system)
- **BLT's model** (combining rankings using probabilistic distributions)
- **Genetic algorithm** for finding an optimal ordering with respect to the Kendall tau metric

Analyzed model performance using simulation and measured deviation from a reference ranking
Implemented in Python; visualized results using libraries such as Matplotlib and Seaborn
Applicable to sports rankings, recommender systems, and competition analytics

01/04/2025 – 01/05/2025
Online Chess - Real-time Web Application

- Developed an online chess game with full rule logic implemented
- Enabled real-time gameplay between two users using the SignalR library (WebSocket communication)
- Implemented user authentication, game state display, and move history
- Frontend built in **Angular**, backend in **ASP.NET Core**; data stored in **PostgreSQL** (JSONB)
- Deployed to a self-hosted server via a DigitalOcean Droplet with NGINX configuration

Link https://github.com/diki000/Chess

HONOURS AND AWARDS

20/10/2024
1st place at the Bit.hack hackathon – City of Bjelovar

- Won **1st place** and a **€5,000 cash prize** at a three-day hackathon organized by the City of Bjelovar
- Team of 4; developed a digital solution to **digitize a complex community center reservation process** in the city
- Built a functional application prototype with an **admin interface** and a **user-facing portal**
- Contributed to **user needs analysis**, **UX/UI design**, and the **technical implementation** of the solution

Link https://www.bithack.tpbj.hr/

SKILLS

Tehničke vještine

web programming | Objektno orjentirano programiranje (C#, Python) | Programiranje (c++, python) | JavaScript Framework | tools for software configuration management

Soft vještine

Timski rad | think critically | tolerate stress | encourage teambuilding

EDUCATION AND TRAINING

2009 – 2017 Bjelovar, Croatia
PRIMARY EDUCATION IV. Primary School Bjelovar

Address Andrije Hebranga b.b., 43000, Bjelovar, Croatia ｜ **Website** http://os-cetvrta-bj.skole.hr/

03/09/2007 – 25/05/2021 Bjelovar, Croatia
SECONDARY EDUCATION Gimnazija Bjelovar

Address Ul. Matice hrvatske 17, 43000, Bjelovar, Croatia ｜ **Website** http://www.gimnazijabjelovar.hr/index.php

04/10/2021 – 01/07/2024 Zagreb, Croatia
BACHELOR'S DEGREE IN COMPUTER ENGINEERING (UNIV. BACC. ING. COMP.) University of Zagreb, Faculty of Electrical Engineering and Computing (FER)

Address Unska ul. 3, 10000, Zagreb, Croatia ｜ **Website** https://www.fer.unizg.hr/

25/07/2024 – CURRENT Zagreb, Croatia
MASTER'S DEGREE IN COMPUTER SCIENCE (COMPUTER SCIENCE TRACK) University of Zagreb, Faculty of Electrical Engineering and Computing (FER)

Website https://www.fer.unizg.hr/

LANGUAGE SKILLS

Mother tongue(s):   **CROATIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C2	C1	C1	C1	C1
GERMAN	A2	A2	A2	A2	A2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

HOBBIES AND INTERESTS

Hiking and spending time outdoors

Active hiker with several years of experience; visited many mountains in Croatia and Slovenia, including the **Julian Alps**. I value challenge, perseverance, and the sense of calm that comes from achieving goals in nature.