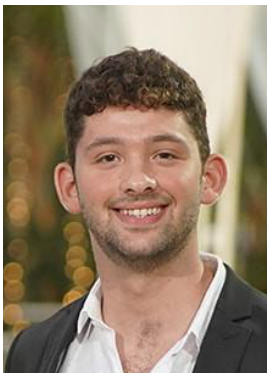

Jonathan Kandel

I am a software engineer with a strong focus on blockchain and backend development. Skilled in Python, Solidity, Circom, Java, Swift, Node JS, Typescript. I am driven by a passion for technology and a commitment to continual learning. My goal is to innovate and leave a meaningful impact in the tech industry, harnessing the power of collaboration and diverse perspectives with privacy and security oriented.

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Github.com/daBatmanCoder

Work experience

August 2023 – present

Senior Backend Blockchain engineer | Cellact NL Amsterdam

- Key technologies: Solidity, Java, Maven, hardhat, Swift, Google Cloud Functions, Firebase (Firestore, Messaging), IPFS, Smart contracts (ERC721, ERC20, ERC1155), Python, Node JS and Typescript
- Project 'Arnacon' Overview: led the development of a pioneering decentralized communication application. This project involved creating a secure, efficient, and user-friendly application using a blend of cutting-edge technologies and blockchain principles (see GitHub)

Key Contributions and Achievements:

- SDK Development & Maintenance: Designed, developed, and maintained a comprehensive SDK for Android and iOS, acting as the backbone of the Arnacon application. The SDK seamlessly integrates backend services and Web3 functionalities, facilitating secure, efficient interactions with decentralized systems. Implemented with best practices and design patterns to ensure scalability, reliability, and ease of integration.
- Blockchain Integration: Implemented 150+ blockchain smart contract technologies focusing on managing the global identity system in Arnacon, using Solidity and Python, to embed secure transaction and messaging capabilities.
- Backend Solutions: Configured and managed 100+ backend services using Google Cloud Functions and Firebase, ensuring seamless data handling and real-time messaging functionalities designed to handle real-time data processing, integrate seamlessly with the Arnacon SDK, and provide efficient, cost-effective solutions for Web3 and traditional backend interactions.
- Blockchain & ZK-Proofs Expertise: Hands-on experience with ZK-SNARKs and the Semaphore protocol for privacy-preserving solutions. Worked and designed 20+ Circuits in Circom language, spoke at a Web3 talk in Amsterdam, presenting comparisons of ZK-proof solutions, with a focus on the simplicity and effectiveness of Semaphore.
- Spoke at ETHDam2025 and in Dutch Blockchain week about the Arnacon project.
- IPFS for Data Storage: Integrated IPFS to store data in a decentralized manner, enhancing security and user privacy.
- Kamailio Server Maintenance: Maintain and enhance SIP services across 4 Kamailio servers for optimized VoIP calling functionality, utilizing Kamailio configuration language for custom SIP routing and features.
- Encryption and Security: Employed advanced encryption methods for securing data (AES, PBKDF2), emphasizing blockchain-based encryption (keypair) to safeguard user information and communications.
- Innovative Problem Solving: Addressed unique challenges in decentralized application development, applying innovative solutions to improve functionality and user experience.

HACKATHON EXPERIENCE

- TON Blockchain Hackathon (Telegram Mini-apps) - *3rd Place*
  Enhanced mini-app with TON Name Service and crypto payments via Tonkeeper, integrated into Telegram's ecosystem.
- ZK-Proofs Hackathons
  Created a ZK-based gift card system for small businesses, enabling secure, privacy-preserving gift card validation-ETHDam2024

Created a Will that is private using ZK technologies and Oasis network ROFL new protocol, enabling secure, privacy-preserving inheritance system- ETHDam2025

Professional Impact: this project highlights capabilities to design and develop advanced decentralized applications, setting a benchmark in the realm of secure and private digital communication. Underscores expertise in blockchain technologies, server-side programming, and front-end development, showcasing a comprehensive skill set in software engineering.

Education

September 2022 – February 2023

Erasmus+ Exchange | Universität Innsbruck

- Developed a distributed system project utilizing AWS applications such as EC2, Lambda functions, Amazon Rekognition, S3, and Redis. The project involved retrieving pictures from an S3 database, analyzing, and generating emotion-based collages. Docker containers were utilized for efficient deployment and management of project components.
- Completed a robotics course focusing on designing, simulating, and testing robotic systems using CoppeliaSim software.

October 2020 – July 2023

BSC. Computer Science | Reichman University, Herzliya

- Created 10 Object-Oriented Programming (OOP) projects in C#, including a checkers game that focused on OOP principles such as abstraction, encapsulation, and inheritance. GPA: 9.2
- Created a functional website using JS, CSS, and HTML, stored locally.
- Acquired knowledge and skills in machine learning techniques, including supervised and unsupervised learning, deep learning, and reinforcement learning. Worked with popular algorithms like linear regression, decision trees, K-means, logistic regression, Karnal, and PAC. GPA: 8.2
- Proficient in SQL queries for designing and managing databases, conducting data analysis operations, and performing database management tasks.
- Skilled in C language programming and Linux. GPA: 9.2
- Head student for two consecutive years. Conveyed student concerns and feedback, demonstrated leadership, organizational, critical thinking, and time management skills in coordinating and planning student events while balancing academic commitments.

Languages

Hebrew
Native

English
CEFR: C2

Spanish
CEFR: B1

Dutch
CEFR: B1