Amirreza Radjou

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EXPERIENCE

Software Developer: CNSim - A Consensus Network Simulator (May 2023 - present)

- Spearheaded the development of CNSim, an open-source simulator for in-depth analysis of consensus networks, developed by the Enterprise Systems Group of York University.
- Focused on the design and execution of various consensus algorithms and sophisticated attacks.
- Implemented clean code practices, design patterns, and JUnit tests to ensure the reliability and maintainability of the simulator.
- Developed visualizations for analyzing simulation results and performed data cleaning and scripting tasks for preprocessing raw data.

Fullstack Developer: CO2 Emissions in Bitcoin Mining (Sep 2023 - Dec 2023)

- Conducted comprehensive environmental impact analyses by quantifying CO_2 emissions from Bitcoin mining operations, utilizing data analytics.
- Collaborated with faculty member specializing in Economics and Blockchain technology, Assistant Professor Andrea Podhorsky.
- Developed frontend interfaces using Flutter and CSS, integrated with RESTful APIs built on Django framework for backend functionality.

SKILLS

- **Programming Languages:** Python, Java, C++, JavaScript, Dart, TypeScript, GO, Rust, Scala, Kotlin
- **Web Development:** HTML, CSS, React, Node.js, Django
- **Database Management:** MySQL, MongoDB, PostgreSQL, GraphQL, Firebase
- **Software Development:** Agile, Git, Docker, CI/CD, Maven
- **Machine Learning/AI:** TensorFlow, PyTorch, Scikit-learn, Keras, XGBoost, OpenCV
- **Data Analysis:** Pandas, NumPy, R, Tableau, Matplotlib, Seaborn
- **Advanced Cryptography:** Asymmetric/Symmetric Key Algorithms, Cryptographic Hash Functions, Digital Signatures, Elliptic Curve, RSA, AES
- **Blockchain Infrastructure:** Node setup, Network protocols, Consensus mechanisms (PoW, PoS, DPoS, PoH, PPoS)
- **Mobile App Development:** Flutter, React Native, Kotlin, Android Studio
- **Soft Skills:** Leadership, Team Collaboration, Problem Solving, Critical Thinking, Time Management, Communication Skills

Education

Master of Computer Science, York University, Toronto, Ontario, Canada		Sep 2022–Present
Bachelor of Science in Computer Science, Amirkabir University of Technology, Tehran, Iran		Oct 2018– Aug 2022

PERSONAL PROJECTS

HashChain — Blockchain, JavaScript, Ethereum, Solidity

Developed HashChain, an innovative blockchain network leveraging JavaScript for core functionality. Integrated Ethereum blockchain to facilitate secure, decentralized transactions. Employed Solidity for crafting efficient, secure smart contracts. Utilized advanced cryptographic techniques (SHA-256, Merkle Trees) to enhance network security and integrity, resulting in a robust platform for secure digital transactions.

FoF — Flutter, Django, Graph Theory, Machine Learning

Spearheaded the development of FoF, a dynamic social media platform, using Flutter for an intuitive front-end and Django for a robust back-end. Applied graph theory algorithms to expand social network connections and machine learning models for intelligent, personalized user activity recommendations. Focused on creating a user-friendly interface while ensuring stringent privacy and security measures, contributing to an engaging and safe social networking experience.

Price Estimation for Cars — Python, BeautifulSoup, Selenium, Pandas, NumPy

Orchestrated the development of a comprehensive car price estimation tool. Utilized Python for its flexibility and efficiency. Implemented web scraping techniques using BeautifulSoup and Selenium to gather extensive data from various online sources. Leveraged Pandas and NumPy for in-depth data analysis and modeling, providing accurate and reliable car price estimations. This project demonstrated exceptional skills in data mining, processing, and application in a real-world context, offering valuable insights into the automotive market.

Spy Game — Android Studio, Java, Mobile Game Development

Conceptualized and developed 'Spy Game', a captivating multiplayer spy-themed game for Android platforms. Managed the entire game development process using Android Studio, emphasizing engaging gameplay mechanics and interactive user interfaces. Utilized Java for core game development, ensuring smooth gameplay and a compelling user experience. Successfully launched the game on the Bazaar app store, achieving substantial downloads and positive user feedback, illustrating proficiency in mobile game development and market analysis.