Ali **Shariatmadari**

alish2001 | alish.se | a3sharia@uwaterloo.ca | alish2001

Skills

Languages Python, C++, TypeScript, JavaScript, HTML/CSS, Java, C, Assembly, SQL, Solidity
Tools/Frameworks Kubernetes, Docker, React, Node.js, MongoDB, AWS, Web3.js, Hardhat, Flask, Selenium, Bash

Experience

CapsuleNFT – Software Engineering Intern **New York, NY |** *Sep 2022 – Present*

- Creating fullstack web3 protocol for creating composable NFTs using Solidity, Hardhat, Ethers.js, React and Material-UI
- Upgraded smart contract integration tests to use live data and Hardhat test fixtures to speed up test execution by **200%**
- Developed a UI feature using React and Ethers.js to allow users to send and receive CapsuleNFTs

Bloq – Software Engineering Intern **Chicago, IL |** *Sep 2022 – Present*

- Developing infrastructure for cryptocurrency staking and managed blockchains using Kubernetes, Docker, and Node.js

Bloq – Software Engineering Intern **Chicago, IL |** *Jan 2022 – May 2022*

- Developed monitoring and backup tooling for managed blockchain services using Node.js, Docker, and AWS, expanding the test coverage of live nodes by **29%** and speeding up node backup generation by an average of **200%**
- Migrated monitoring dashboard and MongoDB database from Docker-Compose to Kubernetes with persistent storage
- Deployed an NGINX ingress controller on Kubernetes for dynamic API service routing to allow for zero-downtime deployments with rolling updates, and horizontal scaling of micro services
- Refactored a multitude of Node.js scripts as asynchronous REST API endpoints to allow for remote and parallelized execution
- Containerized, researched, and integrated Polkadot, Binance, and Cardano as managed blockchain cloud services

TD Bank – Software Engineering Intern **Toronto, ON |** *May 2021 – Sep 2021*

- Spearheaded the development of a web banking dashboard using React with a focus on user-experience and predictive content
- Reverse-engineered the online banking protocol to allow for secure rapid prototyping on live data using the ChromeAPI
- Built an ingestion pipeline for data sanitation and analysis, and visualized future predictions based on the data using Chart.js
- Co-led a research project on NFT markets and presented findings to **600+** staff and executives

Projects

DiVA – Decentralized Voting | **Hack the North 2021 Winner** ***Solidity, web3.py, Flask***

- A decentralized global election system powered by Smart Contracts on the Ethereum Network
- Prevented fraud and increased security by adding human and photo ID verification using Azure's Face API with high Accuracy
- Won out of **1,700+** participants

CtrlAir.Space – Gesture Control | **Hack the North 2020 Winner** ***Python, Mediapipe, OpenCV***

- A gesture-based human-computer interface for touch-less control using only a webcam
- Interpolated a user's finger landmarks for smooth mouse control using Google Mediapipe
- Trained and tweaked a custom gesture recognition model using OpenCV to execute system commands based on hand gestures
- Won out of **2,200+** participants

Vortex – Game Engine ***Java***

- A modular 2D game engine with adherance to OOP princples, display buffering, collision detection, and spritemap parsing
- Utilized the engine to build a two-player 2D shooter game based on the Portal series with support for user-created levels

Lia – Programming Language ***Java, Swing, Regex***

- A statically-typed interpreted language with support for storing 2 data types, loop structures, and type-checking
- Built a lexer using Regex for input tokenization and an editor environment using Swing for code execution and error handling

ShotSpot – Photography Map | **StarterHacks 2020 Winner** ***Python, JavaScript, Node.js***

- A dynamic map of top photography locations using scraped photo and location data from Instagram using BeautifulSoup4
- Won out of **500+** participants

Education

University of Waterloo – Honor's Bachelor of Software Engineering (BSE) **GPA 3.7 | 3A Term |** *2019 – 2025*

- Courses: Data Structures & Algorithms, OOP with C++, Compilers, Databases with SQL, Statistics, Linear Algebra