

# Akshar Barot

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## EDUCATION

### University of Waterloo

Waterloo, ON

*Bachelor of Software Engineering, Honors*

*2023 - Present*

- **90.86%** cumulative GPA
- Relevant Coursework: Programming Principles (C), Intro to Methods of Software Engineering, Linear Algebra, Intro to Data Abstraction and Implementation (C++)

## SKILLS

**Languages:** TypeScript, JavaScript, C, C++, Java, Python, HTML/CSS, Bash

**Libraries:** Next.js, React, Tailwind CSS, Node.js, Express.js, OpenCV, Mediapipe, Three.js

**Developer Tools:** Firebase, MongoDB, WebSockets, Jupyter Notebook, UNIX, Git, Powershell

## EXPERIENCE

### Lead Frontend Developer | *Next.js, TypeScript, Tailwind, shadcn, HTML/CSS*

Feb. 2024 - Present

*Wat Street*

*Waterloo, ON*

- Designed and led the development of the [club site](#), optimizing performance and achieving **100%** on Lighthouse
- Architected an algorithmic trading backtesting application, integrating stock and crypto market data APIs
- Built a statically served research page for club members' papers, implementing tag-based toggle filtering

### Operations Technology Specialist | *Tailwind, HTML/CSS*

May. 2024 - Present

*Brew Bites*

*St. Louis, MO*

- Designed and launched a website with SEO optimization, increasing web traffic and online inquiries by **85%**
- Developed an interactive digital menu system, reducing manual updates by **2 hours** weekly
- Led networking efforts with local organizations to secure catering contracts, driving a **300% revenue increase**
- Created graphic designs for signage, flyers, and marketing, enhancing brand identity and community engagement

### Project Team Member, Microsoft Azure & AI

May. 2024 - Aug. 2024

*Waterloo Experience Accelerate Program*

*Waterloo, ON*

- Designed an AI financial advisor with **Microsoft Azure and AI**, including custom models for personalized advice
- Researched key financial investing principles to ensure accurate and reliable investment recommendations
- Collaborated with a multidisciplinary team to design a pipeline and deliver a proposal for a market-ready solution

## PROJECTS

### Jarvis 🦾 - Interactive 3D Hologram Environment | *Next.js, TypeScript, Python, Flask, OpenCV, Mediapipe, Three.js*

- Features on **OpenCV Live** for building a gesture-controlled hologram using hand and gesture tracking technology
- Integrated hand tracking, depth sensing, gesture recognition, and voice commands with the **Web Speech API**
- Rendered 3D models with Three.js and React with Typescript, making real-time updates with **WebSockets**

### BASIC Web 🦾 - BASIC Compiler for Web Dev (**UoT Hacks '24 Winner**) | *TypeScript, JavaScript, HTML/CSS*

- Designed an imperative programming language while considering grammar sets and syntactical features
- Built a compiler in **TypeScript** using recursive parsing to construct an abstract syntax tree
- Interpreted code using a runtime library to bundle program to a single HTML file

### Portfolio + Blog 🦾 | *Next.js, TypeScript, JavaScript, Tailwind CSS, HTML/CSS*

- Implemented static site generation for Markdown blog posts resulting in **1.8x** faster loading times
- Designed a sleek, responsive UI using Tailwind CSS by considering breakpoints for **cross-platform capability**

### Shopping List App | *JavaScript, Firebase, HTML/CSS*

- Incorporated efficient data management using **Firebase Realtime Database** for seamless updates and storage
- Deployed as a **Progressive Web App (PWA)** enabling accessibility across web, Android, and iOS platforms