Yoen Zhang

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EDUCATION

University of Waterloo | Bachelor of Computer Science (Honours)   *Sep. 2020 - Apr 2025 | Waterloo, ON*

TECHNICAL SKILLS & TOOLS

Languages: Python, Swift, JavaScript, TypeScript, Java, C/C++, PHP, SQL, HTML/CSS, Racket
Frameworks/Libraries: SwiftUI, UIKit, React, Flask, Vue.js, Express.js, Laravel, Node.js, Bootstrap, Apache
Tools/Technologies: Git, Docker, CI/CD, MongoDB, MySQL, Pandas, NumPy, PyTorch, OpenCV, Selenium, Docker

EXPERIENCE

Mobile Software Developer - iOS | ESPN Bet, theScore   *Toronto, ON | Jan 2024 - Aug 2024, May 2025 - Aug 2025*
- Completed **160+ tickets** over **12 months**; recognized as the **top-performing intern** company-wide over **1 year tenure**
- Led iOS development for the **"Parlay Lounge"**, **"BetVision LiveStream"** & "MyBets 3.0" using **SwiftUI**, collaborating with product & design to launch **4 weeks ahead of schedule**, improving roadmap velocity
- Developed & shipped flagship UI features, utilizing **Swift** & **UIKit**, driving engagement across **2.5M+ monthly users**
- Refactored Casino-native & legacy components into **modular, reusable SwiftUI packages**, enabling **cross-team adoption** & improving code consistency across the mobile platform

Data Pipeline Engineer – Undergraduate Research Assistant | TRAFFIC   *Remote – London, UK | May 2025 – Aug 2025*
- Designed and deployed an end-to-end **Airflow** pipeline to ingest, deduplicate, and classify ivory-trafficking news from six sources (Google Alerts, NewsAPI, NYTimes RSS, Currents API, Guardian API, Mediastack API), achieving comprehensive global coverage
- Upgraded the **NLP extraction module** from **GPT-3.5** to **Gemini 2.5 Flash Pro** for structured article parsing; implemented JSON parsing with fallback mechanisms and intelligent negative-example collection, reducing false positives by **70%**
- Engineered a ML pipeline with **TF-IDF vectorization**, a **Random Forest classifier**, and optimal thresholding; achieved **99.9% accuracy**, **100% precision**, and **99.7% recall** on test data of over 6000 examples, acheiving a **25%** F1-score improvement over the baseline Logistic Regression model
- Built robust **data scraping and enrichment** pipelines using **Python**, **BeautifulSoup**, and **PostgreSQL**, incorporating retry logic, idempotent task execution, and comprehensive error handling across multiple API integrations

Frontend Developer | Mozilla   *Toronto, ON | Sep. 2022 – Dec 2022, May 2023 - Aug 2023*
- Designed & managed **A/B experiments** enrolling **10,000-1,000,000+ users**, influencing key **Firefox** features, **product strategy & user experience** decisions for millions of users worldwide
- Integrated backend telemetry with **Glean SDK**, contributing to large-scale data aggregation in cross-platform experiments
- Developed modular & reusable **React** components for internal platforms, enabling adoption across **5+ engineering teams** & standardizing UI patterns company-wide
- Upgraded an internal **SCRUM tracking tool** using **React** & integrated custom tagging to replace manual JIRA processes, improving bug reporting & increasing team ticket output by **200%**
- Developed automated **Node.js** scripts to populate **Looker dashboards**, reducing manual reporting time & streamlining data visibility for internal stakeholders

Fullstack/Backend Developer | Mobials Inc   *Toronto, ON | Jan 2022 - Apr 2022*
- Enhanced **AutoVerify's API** using **PHP**, allowing **1,000+ business clients** to offer real-time pre-approvals for insurance & vehicle estimates
- Architected **RESTful APIs** for partner integrations, ensuring stable consumption by automotive vendors
- Optimized **SQL queries** by **50%**, leveraging **Postman** for API testing to improve accuracy & system efficiency
- **Automated PHP Unit tests** & **CI/CD pipelines** for backend services, reducing deployment bugs by **40%**
- Collaborated with DevOps to integrate API services with monitoring tools like **New Relic**/**Sentry**, improving backend observability & debugging speed

Fullstack Developer | Goodfood Market Corp   *Toronto, ON | May 2021 - Aug 2021*
- Developed **full-stack data anonymization scripts** using **Laravel** & a **Vue.js** interface, allowing internal teams to securely hash or remove customer data based on subscription changes
- Migrated & optimized **over 1.5 million user records** and **10+ million data points** using **MySQL queries**, ensuring alignment with evolving business models & subscription plans
- Built an internal HR tool using **React** to streamline **user management & customer report logs**, improving customer support operations

PERSONAL PROJECTS

Suggestify | `github.com/yoenzhang/Suggestify` | Python, PyTorch, React Native, Flask, FAISS, MFCCs
- Designed an AI-powered music recommendation app inspired by **Shazam**, leveraging **MFCC-based audio fingerprints** & **FAISS indexing** to match user-input audio against a database of **8,000+ songs**
- Built a **Flask** backend with a **React Native** front-end, enabling real-time song identification & AI-driven suggestions based on user input

StatCheck | `github.com/yoenzhang/StatCheckWeb` | Python, Swift, React, NBA API
- Developed an iOS app using **Swift** & **React**, integrating the **balldontlie.io API** to fetch real-time NBA statistics for players dating back to 1946