

# Alex Titov

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## EDUCATION

**BS, Computer Science and Engineering, University of California, Merced**

**Dec 2025**

Algorithm Design and Analysis, Data Structures, Object Oriented Programming, Artificial Intelligence, Database & Networking, Full-Stack Web Development, Mobile Development, Game Development, Computer Networks, Software Engineering, Circuit Theory, Computer Vision

## WORK EXPERIENCE

**Software Engineer Intern | ZetOrder**

**Mar 2021 – Mar 2024**

- Engineered and developed an iOS app in **SwiftUI** for gathering data to train a **custom LLM**. Utilized artificial intelligence to generate customer profiles, text-to-speech, speech recognition, and chat conversation.
- Set up **Firestore** in **Google Cloud** to store all data from mobile client and Google login & authentication.
- Rebuild legacy web client from **Angular** to **React**, speeding up front-end rendering by up to 50%.
- Build backend server in **Go** from scratch, implementing auth, token management, **web sockets**, large file migration.

**Software Engineer Intern | University of California, Merced**

**Aug 2023 – Current**

- Developed** and launched **MobileID**, a virtual campus ID app now used by over **5,000 students**, transforming the student experience by enabling secure mobile access to physical ID credentials.
- Integrated** the DCID system for **Apple Wallet** and **Google Wallet**, creating a streamlined digital ID solution that reduced physical ID dependency by **40%** and enhanced accessibility.
- Designed and implemented** an **AI Virtual Assistant** with real-time information capabilities, improving student and visitor engagement for over **2,000 users** and enhancing response efficiency.
- Optimized AI accuracy** by 350% through custom function integration with OpenAI, resulting in significantly faster, more accurate information delivery.
- Engineered** custom APIs in **Next.js** to enable **Speech-to-Text** and **Text-to-Speech** functionality, supporting **12 languages** and enhancing user accessibility on mobile devices.
- Developed** a dynamic vector database that retrieves real-time data from UC Merced websites, accelerating data integration by **30%** and improving system response times.
- Integrated Google Maps SDK** for interactive campus navigation, simplifying access to location-based information and improving user experience.
- Deployed** Docker containers for both the web app and vector database, achieving a **20% reduction** in deployment time while partnering with IT to create a scalable infrastructure.
- Enhanced reliability** with **99.9% uptime** by optimizing backend solutions using **PHP, OracleDB, and MySQL**, ensuring real-time data handling and synchronization.
- Accelerated system speed** by 30% through database query optimization, delivering faster, more responsive user interactions.
- Leveraged technologies like **Docker, Nginx, REST APIs, SQL, and JSON**, building a scalable and high-performance application architecture.
- Participated in agile sprints**, collaborating cross-functionally to meet project milestones consistently and deliver high-quality solutions.

**Full Stack Engineer | Co-Founder | SocialTech Labs, Inc**

**Mar 2021 – Mar 2024**

- Co-founded and spearheaded development at BestFriendsNetwork, a **non-profit mental health app** for teens, achieving a user base of over 10000 within the first six months.
- Engineered and implemented an intuitive user interface for the iOS client using **SwiftUI**, resulting in a 25% increase in user engagement and a 15% improvement in overall app satisfaction ratings.
- Engineered a high-performance REST API server in **Go**, integrating **DynamoDB** for robust data persistence and a **Redis** cluster through **AWS ElastiCache**. Achieved a remarkable 70% reduction in average request time, enhancing system responsiveness and user experience.
- Orchestrated the deployment of the server **DockerImage** on an AWS-hosted **Kubernetes** cluster, optimizing scalability and achieving a 40% increase in system reliability.

## PROJECTS

**RezAI:** Developed a React app and a Node server allowing users to upload their resume and a job description, generating an updated resume, cover letter, skills to patch up on, interview prep questions, and more. Built custom **Python scripts** for file editing and conversion. Integrated **Stripe** for payment processing and hosted through AWS **Kubernetes**.

**Allynx:** Developed a virtual chatbot in **React** for UC Merced, allowing users to get real-time information about classes, events, dining and more through a **vector database**. Deployed **MariaDB** clusters for user management and authentication.

**ParkPals:** Created an iOS app in SwiftUI, allowing users to learn how to train their dogs, connect with nearby dog owners, and ask an AI chatbot for dog-related information. Implemented custom APIs, **S3** storage, **NoSQL** database, and analytics, hosted in **AWS**.

**Languages:** JavaScript, TypeScript, HTML/CSS, Python, Java, Bash, C, C++, C#, Swift, Go, Kotlin, Dart

**Frameworks:** React, Angular, NextJS, Tailwind, OpenCV, Vue, Spring Boot, Node, Express, Bootstrap, jQuery, Flutter

**Tools:** Amazon Web Services, Google Cloud, Kubernetes, Docker, Git, Unix, SQL, NoSQL, WebSockets, RESTful APIs

**Concepts:** Machine Learning, Computer Vision, Software Engineering, Frontend, Backend, Database Management, Analytics