UBAID ULLAH KHAN

SOFTWARE ENGINEER

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Work Authorization: Authorized to work in the U.S.; no immediate sponsorship required.

SUMMARY

Software Engineer building production web applications and data-driven systems using React, TypeScript, JavaScript, Python, SQL, and cloud-based technologies. Currently developing and owning a secure internal fintech admin platform at SWIVEL, delivering reusable UI components, authenticated workflows, search and retrieval systems, and AWS-integrated application features for operational teams. Experienced across the full software lifecycle, including requirements gathering, design, development, testing, releases, and production support, with a focus on usability, maintainability, performance, and reliable user experiences. Background also includes applied research, privacy-focused systems, and award-winning software projects built for real-world users.

SKILLS

Frontend: React, TypeScript, JavaScript, HTML5, CSS3, Responsive Web Design, Component-Based Architecture, State Management (React Hooks), REST API Integration, OAuth, Data Tables and Dashboard Interfaces, Accessibility (WCAG)

Backend & APIs: Node.js, RESTful APIs, Microservices, Serverless Architectures

Cloud & DevOps: Amazon Web Services (AWS), Google Cloud Platform (GCP), Azure DevOps (CI/CD), Git, Agile/Scrum

Programming & Data: Python, SQL, PostgreSQL, MySQL, MongoDB, Snowflake, Firebase, Elasticsearch

Tools & Practices: Figma, LaunchDarkly, Datadog, Debugging, Performance Optimization, Production Support

RESEARCH PUBLICATIONS

- ScooterLab: A Programmable and Participatory Sensing Research Testbed using Micromobility Vehicles | 2024 - Link
- Recipe Creation Using Food Images Through Inverse Cooking | 2022 – Link

EXPERIENCE

SWIVEL (SWBC) **Sep 2025 – Present**

Jr Software Engineer | San Antonio, TX

- Designed, developed and owned the Swivel Pay Admin platform from scratch using **React** and **TypeScript**, building **10+ production pages** including data dashboards, administrative workflows, and secure account management interfaces.
- Built complex UI workflows using **React Hooks**, including large data tables, column-level filtering, and **authenticated actions** integrated with AWS **Lambda** APIs and **Elasticsearch**-backed search services.
- Improved data retrieval and search performance across large operational datasets by optimizing Elasticsearch queries and frontend data flows, reducing query response time by **~40%** & improving search latency from ~2.5s to under 1.5s.
- Implemented a **new application security layer** and **authentication workflows**, strengthening secure access controls while improving the overall usability and reliability of internal operations.
- Led the **full software lifecycle** from stakeholder discussions and planning through development, internal testing, release administration, and post-release support.
- Modernized an older internal tool into a centralized administrative platform, reducing operational friction and enabling teams to perform multiple workflows through a single interface.
- Administered **production releases** and quickly resolved issues discovered during internal testing, delivering prompt fixes and maintaining stable application performance.
- Drove strong early adoption with internal teams, with over 80% of users transitioning workflows to the new platform within initial rollout.

ScooterLab - UTSA **Nov 2023 – Sep 2025**

Software & Systems Engineer, Research Assistant | San Antonio, TX

- Developed software components supporting large-scale mobility data collection and analytics using **Python**, **JavaScript**, SQL, and cloud-based systems, collecting over 1.5 TB of data.
- Implemented privacy-preserving **data processing techniques** for sensitive visual and sensor data.
- Built and integrated **IoT-based data pipelines** with backend systems, enabling real-time data ingestion and experimental analysis across distributed sensor networks, contributing to peer-reviewed research.

SWBC **Jun 2025 – Aug 2025**

Software Engineering Intern | San Antonio, TX

- Contributed to development of the Swivel Pay Admin platform using **React**, **TypeScript**, and **AWS**, implementing frontend features and supporting API integrations within an AWS-based environment.
- Worked with engineering and business stakeholders to translate operational needs into functional UI workflows.
- Improved code maintainability by adopting TypeScript patterns and contributing to frontend structure refinements.

InfoVision Inc (Comerica Bank) **May 2024 – Aug 2024**

Data Analyst Engineer Intern | Dallas, TX

- Developed data automation tools using **Python** and **SQL** to streamline data ingestion, transformation, and reporting workflows through ETL pipelines.
- Supported cloud-based analytics solutions using **AWS** and **Snowflake**, contributing to data migration from on-premises systems to scalable cloud infrastructure.

CommLab India LLP **Sep 2022 – Jul 2023**

Lead Web Developer | Hyderabad, India

- Led development of client-facing web applications using HTML, CSS, and JavaScript, delivering frontend features across multiple projects while coordinating small development teams.
- Improved application performance and usability through frontend optimizations and stakeholder-driven feature enhancements.

PROJECTS

SWallet - 1st Place, RowdyHacks

- Designed and developed a secure fintech digital wallet using **React, PostgreSQL, REST APIs**, and **cloud services**, building responsive interfaces for account management, transaction history, and payment workflows.
- Implemented secure transaction flows and fraud-detection logic using Python-based services and data-driven validation techniques.
- Built dynamic UI components to handle real-time transaction updates, improving usability and reliability of financial interactions for underbanked users.

FloodGuard - 1st Place, ShellHacks

- Built an **AI-driven multi-agent system** for proactive flood prediction and response, integrating real-time data ingestion, and predictive analytics for flood risk detection, and decision workflows.
- Developed application interfaces and visualization workflows enabling users to monitor risk scenarios and analyze predictive outputs.
- Implemented backend data pipelines using **Python** and **cloud infrastructure** to support simulation workflows and large-scale environmental datasets.

ProDuh! - 1st Place, HackUTD

- Developed a product management platform with **React-based dashboards** supporting product discovery, strategy planning, and execution workflows.
- Designed interactive UI components for backlog management, workflow visualization, and feature prioritization integrated with cloud APIs.
- Implemented structured data flows and AI-assisted decision support features enabling automated insights across the product lifecycle.

RetroMate – AI Conversational Assistant

- Engineered an AI-driven conversational assistant with natural language understanding integrating **LLM-based reasoning**, vector search, and backend services for contextual dialogue.
- Designed **frontend interaction workflows** enabling dynamic conversation management and personalized responses.
- Implemented backend integrations supporting contextual memory retrieval and scalable AI-driven interactions.

EDUCATION

University of Texas at San Antonio
M.S. in Computer Science | Aug 2023 – May 2025

Jawaharlal Nehru Technological University – LIET
B.Tech in Computer Science | Jul 2018 - Aug 2022