

# Ahmed Khilji

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## Brief

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Graduate of Software Engineering with experience in React, NodeJS, JavaScript, HTML, CSS, Java and C++ seeking a full-time role in full-stack development. Proficient in building responsive web applications using modern frameworks, with a passion for integrating AI technologies to enhance user experiences. Eager to contribute to innovative teams in app or platform development.

## Projects

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### Inkwise – Whiteboard AI

- Developed an interactive whiteboard application using React, Google Generative AI, Tailwind CSS and Firebase, allowing users to draw, add text, and manipulate objects with features like undo/redo, object copying, and image export.
- Implemented user authentication and secure login functionality using Firebase Authentication, enabling users to sign up, log in, and access personalized whiteboard sessions.
- Integrated AI-powered tutoring functionality using Google Generative AI, providing real-time hints and feedback on mathematical problems based on user input and whiteboard interactions.
- Designed a responsive and visually appealing user interface with Tailwind CSS, including chat box interactions and modals for enhanced user experience across devices.

### Twitter Clone

- Developed a full-stack Twitter clone with user management, using React, Next.js, Firebase, Redux, and Tailwind CSS.
- Implemented streamlined state management and core functionality through developing key features such as the ability for users to tweet, comment, and delete posts. Utilized Reacts component architecture and hooks to manage state efficiently, ensuring smooth updates and user interactions across the application.
- Ensured security by integrating Firebase authentication and securing user data with real-time updates.
- Optimized performance and scalability through a well-structured architecture, allowing the application to manage multiple user interactions smoothly.
- Rapidly developed and deployed a robust web application, delivering the project within a tight deadline.

### Netflix Clone

- Leveraged Movie API to develop a responsive website featuring subscription, user management features, and trailer preview capabilities, providing a user experience like Netflix.
- Demonstrated proficiency in reading and implementing API documentation to seamlessly integrate third-party data into the platform.
- Utilized a modern tech stack, including React, JavaScript, HTML, CSS, Next.js, Firebase, TypeScript, and Tailwind CSS, to deliver a robust, responsive web application.
- Enhanced user experience by ensuring smooth data flow between the frontend and backend, whilst maintaining performance and scalability.

### Responsive E-Commerce Book Store

- Developed a web-based application using React, HTML, CSS, and JavaScript to facilitate seamless book purchases.
- with a focus on creating a fully responsive, mobile-friendly user experience.
- Demonstrated meticulous attention to detail, ensuring consistent performance and an optimized user interface across devices and platforms, improving accessibility and usability.

### UTS Staff Administration System

- Utilized Object-Oriented Programming (OOP) principles with Java to develop a Graphical User Interface (GUI) program, enabling staff to efficiently add, delete, and edit student information.
- Applied core OOP concepts such as inheritance, encapsulation, and polymorphism to ensure a well-structured and maintainable codebase.
- Enhanced project understanding by incorporating UML diagrams and design patterns like MVC (Model-View-Controller). This project deepened my knowledge of building user-friendly interfaces while reinforcing fundamental OOP skills.

### Course Recommendation System

- Developed a full-stack course recommendation website using HTML, CSS, and JavaScript for the frontend, integrated with a Python-based backend utilizing Fast API and MongoDB.
- Leveraged Fast API to implement secure and scalable RESTful APIs for recommending student courses based on their interests and hobbies.
- Integrated MongoDB with Motor for asynchronous database operations, enabling efficient handling of large datasets and real-time recommendations.
- Applied CORS middleware to manage cross-origin requests, ensuring secure and controlled access to the APIs from the frontend.
- Enhanced system performance by implementing query optimization techniques in MongoDB aggregation pipelines to match and sort courses based on student interests.
- Tested and deployed the application using automated testing tools and handled backend hosting with AWS Lambda through Mangum for serverless deployment, ensuring high availability and scalability.

### Smart Home Plant Pot

- Designed and programmed a plant pot using Arduino and C++ to monitor temperature, humidity, and soil moisture through integrated sensors.
- Customized and adapted the system for various plant types by utilizing a built-in database, ensuring flexibility for different plant care needs.
- Provided users with real-time insights into plant health and environment conditions through emoticons and visual feedback on an LED screen

## Experience

**Frontend Engineering Intern** - <https://chaos1.au/>  
CHAOS1– Part-time

**Aug 2023 – Nov 2023**

- **Development:** Pioneered the development of a task management dashboard using React, JavaScript and Tailwind, improving team efficiency by optimizing task workflows and reducing organizational complexity.
- **AI-Driven Solutions:** Collaborated with the frontend team to design and implement a dashboard showcasing diverse AI prompts and insights, enhancing decision-making for military personnel through real-time information access.
- **Testing & Backend Integration:** Assessed and Tested LLM features, ensuring the successful integration of AI into the platform, while working closely with the backend team to design scalable solutions.
- **Cross-Functional Teamwork:** Facilitated cross-team collaboration, streamlining communication among teams using JIRA and GitHub, ensuring smooth project progress and adherence to deadlines.

**Engineering/Project Managing Intern** - <https://newcon.com.pk>  
NEWCON Australia Consultancy – Full-time

**April 2021 – Oct 2021**

- **Project and Stakeholder Management:** Led project and technical management for the installation of solar panels on farms, coordinating cross-functional teams and stakeholders to meet customer requirements, secure senior management approvals, and ensure successful project execution within timelines, consistently delivering projects that exceeded customer expectations.
- **Stakeholder Communication:** Effectively communicated with different councils, companies, and multiple stakeholders throughout the project, facilitating successful delivery and ensuring all parties were aligned and informed.
- **Adaptability and critical thinking:** Effectively addressed challenges by adjusting strategies to meet changing project requirements. Quickly learned new concepts and applied problem-solving techniques to ensure the successful installation of solar panels, contributing to project success and stakeholder satisfaction.
- **Timely Project Delivery:** Managed the technical aspects of solar panel installations on farms, coordinating with cross-functional teams and stakeholders to meet customer requirements, secure senior management approvals, and ensure timely project delivery.

**IT/Business Administrator**  
Penrith Council – Full-time

**Jan 2018 – May 2018**

- **Optimized Data Analysis for Decision-Making:** Spearheaded the integration of data analysis tools to streamline invoice tracking and IT asset management, which reduced processing times by 15% and enabled more informed decision-making.
- **Mastered Office and Management Tools:** Expertly utilized Microsoft Office Suite, project management software, CRM systems, and database management tools to track and streamline administrative tasks. This led to a 10% improvement in project coordination efficiency and more accurate reporting across departments.
- **Improved Customer Service Response Time:** Implemented customer service improvements using CRM systems, resulting in a 20% reduction in response time to inquiries and ensuring timely resolution of client issues.
- **Enhanced Project Management:** Leveraged these tools to plan, monitor, and coordinate multiple projects simultaneously. Ensured clear task delegation and timeline adherence, facilitating seamless stakeholder communication and successful project delivery ahead of schedule.

## Education

**Bachelor of Software Engineering**  
University of Technology Sydney

**Expected Graduation: November 2024**

- **Distinctions:** Database Fundamentals, Software Architecture, Business Requirements Modelling, Interrogating Technology, Prototyping Physical Interaction, Software Design Studio, Engineering Project Management, Math Modelling 2, Engineering Research Preparation
- **High Distinction:** Systems Testing & Quality Management, Engineering Capstone.
- **Credits:** Data Structures & Algorithms, Applications Programming, Advanced Interaction Design

## Technical Skills

**Languages:** HTML5 | CSS3 | JavaScript | Java | C++ | Python | TypeScript

**Frameworks:** React | Next.js | FastAPI

**Technologies:** Git | Firebase | MongoDB | RESTful APIs | Arduino | NodeJS

**Tools:** GitHub | JIRA | Docker | AWS Lambda

**Database:** MongoDB | Firestore

**Design:** Tailwind CSS | Responsive Web Design | UI/UX Principles