

Shiven Aggarwal

Co-founder at 0unveiled · Jammu

Shiven is a full-stack engineer with a strong focus on AI/ML, demonstrated through various personal projects and co-founding experience. They possess a diverse technical background spanning multiple languages and frameworks, showing a propensity for building and exploring new technologies.

Executive Summary

"Promising Mid-Level Engineer with a Strong AI/ML Background"

65% Fit

Shiven demonstrates a genuine passion for AI/ML and full-stack development, evident in their varied project portfolio. While they lack direct professional experience in a traditional software engineering role, their entrepreneurial spirit and willingness to explore different technologies make them a worthwhile candidate for a mid-level React Developer position, provided their frontend skills are rigorously assessed.

KEY DIFFERENTIATORS

- **Strong AI/ML Project Experience:** Shiven's portfolio showcases various AI/ML projects, including NLP, computer vision, and reinforcement learning, indicating a deep understanding of these domains.
- **Full-Stack Capabilities:** Their involvement in projects like 'Talkemon' and 'Lunaris' demonstrates experience with modern full-stack technologies such as Next.js, TypeScript, and Prisma.
- **Entrepreneurial Drive:** Co-founding 0unveiled suggests a proactive and ownership-oriented mindset, valuable in a startup environment.

Technical Competency Matrix

DOMAIN	PROFICIENCY	TECHNOLOGIES
Languages	INTERMEDIATE	TypeScript JavaScript Python Go CSS HTML C
AI & ML	ADVANCED	Machine Learning Artificial Intelligence (AI) PyTorch TensorFlow NLP Computer Vision
Web Systems	INTERMEDIATE	React Next.js Express tRPC Prisma Zod Tailwind CSS Shadcn UI
Infrastructure	BEGINNER	AWS SageMaker Modal Inngest Docker Serverless Functions
Low Level	BEGINNER	C

Project Portfolio Deep Dive

Talkemon Next.js TypeScript React Drizzle ORM PostgreSQL Inngest TRPC

A platform spawning professional AI teammates with features for asynchronous processing of meeting transcripts and AI summarization.

Senior Trait: The project demonstrates a clear understanding of modern architectural patterns with a focus on scalability and type safety. The use of TRPC routing for modularity, Drizzle ORM for database interaction, and Inngest for asynchronous processing showcases thoughtful design choices.

Relevance: This project showcases their ability to build complex web applications using React and TypeScript. The use of modern state management techniques and API design patterns aligns with the requirements of the Senior React Developer role.

A platform aiming to build startup ideas through AI code generation and execution.

Senior Trait: The project leverages E2B code interpretation for stateful AI workflows, integrating tRPC, Next.js, and Prisma for a type-safe and robust foundation. This demonstrates experience with building complex systems that interact with AI agents.

Relevance: This project indicates their ability to integrate AI-powered features into web applications, which could be valuable for visualizing AI-driven code analysis as required in the job description. It also demonstrates experience with Next.js.

Code Quality & Engineering Audit

✓ STRENGTHS

- **Modern Tech Stack:** Their projects often utilize modern technologies such as TypeScript, Next.js, Prisma, and Tailwind CSS, suggesting an understanding of current best practices.
- **Modular Architecture:** Projects like 'Talkemon' and 'Football Analysis' demonstrate a modular design with clear separation of concerns, which is crucial for maintainability and scalability.

⚠ RISK AREAS

- **Security Vulnerabilities:** Multiple projects, especially those involving Python and web frameworks, have high numbers of reported security issues. This needs to be investigated thoroughly during the interview process.
- **Testing Coverage:** Several projects have unknown or insufficient test coverage, raising concerns about code reliability and maintainability. Ask about their experience with unit testing and integration testing.

Hiring Recommendation

IDEAL ROLES

Full-Stack Engineer (AI Focus)
Frontend Engineer (with ML exposure)

STRETCH ROLES

Lead Frontend Engineer (after demonstrated React proficiency)

The Bottom Line: Shiven is a promising engineer with a passion for AI/ML and full-stack development. While lacking direct professional experience in a dedicated frontend role, their project portfolio indicates a willingness to learn and explore new technologies. Focus the interview on assessing their React proficiency, data visualization skills, and approach to security vulnerabilities.

Interview Guide

TECHNICAL DEEP DIVE

Based on their work on 'Talkemon', which uses Inngest for asynchronous processing

"Can you describe the architecture you implemented with Inngest for 'Talkemon', and what were the key considerations for choosing this specific approach for processing meeting transcripts?"

Why Ask: To assess their understanding of asynchronous processing and the rationale behind architectural choices.

GOOD SIGNALS

- Detailed explanation of Inngest's role in the application
- Mentioning scalability and reliability as key factors
- Discussion of trade-offs considered when choosing Inngest

RED FLAGS

- Vague description of Inngest's functionality
- Inability to explain the benefits of asynchronous processing
- Lack of awareness of potential limitations

SYSTEM DESIGN

Given that the job involves visualizing complex data from AI code analysis

"Imagine you need to build a dashboard to display complex code analysis data. What frontend technologies would you choose, and how would you approach the design to make the information accessible and intuitive for recruiters?"

Why Ask: To evaluate their system design thinking, choice of frontend technologies, and understanding of user experience principles.

GOOD SIGNALS

- Discussion of React-based charting libraries (e.g., Recharts, Chart.js)
- Consideration of data aggregation and visualization techniques
- Emphasis on usability and accessibility for non-technical users

RED FLAGS

- Lack of familiarity with data visualization libraries
- Focus solely on technology without considering user needs
- Inability to explain design principles

ARCHITECTURE

Many of their projects, according to the automated analysis, show security vulnerabilities.

"Many projects in your portfolio, as analyzed by our AI, have shown some security vulnerabilities. How do you approach security when building a full-stack application, and what specific measures do you take to prevent common web vulnerabilities?"

Why Ask: To assess their knowledge of security best practices and their commitment to building secure applications.

GOOD SIGNALS

- Understanding of common web vulnerabilities (e.g., XSS, CSRF, SQL injection)
- Mentioning security measures such as input validation, output encoding, and authentication/authorization
- Demonstrated awareness of security tools and techniques

RED FLAGS

- Lack of awareness of common web vulnerabilities
- Reliance solely on framework security features without understanding underlying principles
- Dismissal of security concerns as not being their responsibility

TECHNICAL DEEP DIVE

The job description mentions working closely with backend developers.

"In your experience, what are some key considerations when integrating a React frontend with a backend API? How do you ensure smooth communication and data flow between the two?"

Why Ask: To understand their experience with API integration and their understanding of communication protocols and data structures.

GOOD SIGNALS

- Mention of RESTful APIs or GraphQL
- Discussion of data serialization and deserialization (e.g., JSON)
- Understanding of HTTP methods and status codes
- Awareness of error handling and API documentation

RED FLAGS

- Lack of experience with API integration
- Inability to explain how data is transferred between frontend and backend
- Limited understanding of API concepts

BEHAVIORAL

The role involves working in a fast-paced startup environment.

"Describe a time when you had to learn a new technology or skill quickly to meet a project deadline. What was your approach, and what challenges did you face?"

Why Ask: To evaluate their ability to learn quickly, adapt to new situations, and work under pressure.

GOOD SIGNALS

- Structured approach to learning (e.g., online courses, documentation, mentorship)
- Proactive identification and resolution of challenges
- Ability to prioritize and manage time effectively

RED FLAGS

- Avoidance of challenges or blaming external factors
- Inability to articulate a clear learning process
- Lack of self-awareness of their strengths and weaknesses

ARCHITECTURE

From your 'Nano LLM' and other pure C projects, you seem to have experience at the low level. This is not core to the React role, but it demonstrates breadth.

"Can you describe how your background in 'C' projects like 'Nano LLM' has shaped your approach to building higher-level applications, particularly concerning performance and memory management?"

Why Ask: To assess if they can translate low level experience into senior level architecting.

GOOD SIGNALS

- Understanding of memory allocation and garbage collection
- Awareness of performance optimization techniques
- Ability to abstract low-level concepts to higher-level frameworks
- Understanding tradeoffs
- Discussing manual reference counting

RED FLAGS

- Inability to connect low-level concepts to web development
- Lack of awareness of performance bottlenecks in web applications
- Dismissal of the importance of memory management in modern frameworks

BEHAVIORAL

The co-founder experience is crucial for startups.

"You're a co-founder. Tell me about a time that you had to make a hard technical decision against the preferences of another stakeholder (e.g. another founder). How did you handle this situation?"

Why Ask: To assess how they handle disagreements and difficult stakeholders, crucial in a startup.

GOOD SIGNALS

- Mature way to explain what happened
- Focus on making the right call rather than 'winning' the argument
- Understanding of different stakeholders and priorities

RED FLAGS

- Blaming others or being generally negative
- Inability to admit mistakes
- Unwillingness to compromise or consider different perspectives

Whiteboard Challenge

"Real-time Code Analysis Dashboard"

Design a React component that displays real-time code analysis results (e.g., Cyclomatic Complexity, Security Vulnerabilities, Code Coverage) for a GitHub repository. The component should fetch data from a mock API endpoint (provide a sample JSON structure). The component should be able to: 1. Display the data in a visually appealing and informative way. 2. Allow the user to filter the data based on severity (e.g., Critical, High, Medium, Low). 3. Update the data in real-time using WebSockets (mock the WebSocket connection). Consider performance and scalability. For the data, assume the API returns JSON of the form: `{'projectName': 'ProjectA', 'cyclomaticComplexity': 15, 'vulnerabilities': [{'severity': 'Critical', 'message': 'XSS vulnerability'}, {'severity': 'High', 'message': 'SQL Injection'}]}`

ASSESSMENT CRITERIA

React component structure and code quality Data visualization techniques (charting libraries, UI design)

Filtering implementation Real-time data handling (WebSockets)

Performance optimization (memoization, virtual DOM) Clear and well-structured code