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## **Voice Based Restaurant Billing System**

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Abstract: In today's fast-paced restaurant industry, efficiency and accuracy are paramount. Traditional Point of Sale (POS) systems, while foundational, are increasingly being outpaced by the demands of modern operations and customer expectations. Manual data entry in these systems often leads to delays, errors, and increased training times for staff, which in turn affects service quality and customer satisfaction. This project addresses these challenges by developing a voice-enabled POS system that utilizes advanced speech-to-text technology to transform the way restaurants manage orders, inventory, and payments. The proposed system leverages Google Cloud's Speech-to-Text API to facilitate seamless voice interactions, enabling restaurant staff to place orders, check inventory, and process payments using simple voice commands. This innovation aims to significantly reduce the time spent on data entry and minimize the potential for human error, thereby improving operational efficiency and enhancing the overall customer experience. By automating and streamlining these processes, the system allows staff to focus more on customer service and less on administrative tasks. The voiceenabled POS system integrates several key features: a robust order management module to handle all aspects of order processing, a dynamic inventory management system that updates in real-time, and a versatile payment processing system that supports multiple payment methods. The user interface is designed to be intuitive and user-friendly, ensuring that staff can quickly adapt to the new system with minimal training. Additionally, the system includes comprehensive reporting and analytics tools that provide valuable insights into sales trends, inventory levels, and customer preferences

Keywords: Voice-enabled POS, Speech-to-Text technology ,Order management, Payment processing, Real-time updates, Google Cloud Speech-to-Text API



