LIEWAVE

# Lie Detection Using Speech Processing Techniques


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ÇANKAYA ÜNİVERSİTESİ 1997

BİLGİSAYAR MÜHENDİSLİĞİ

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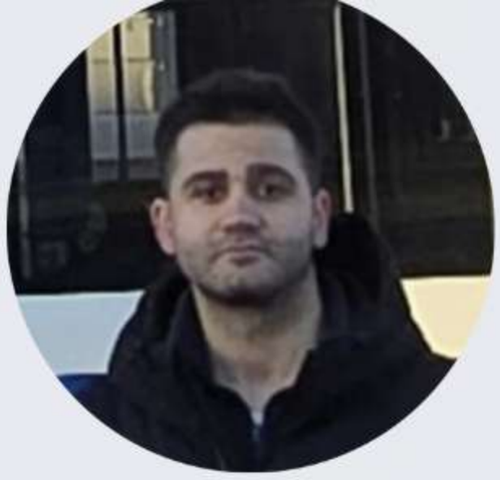
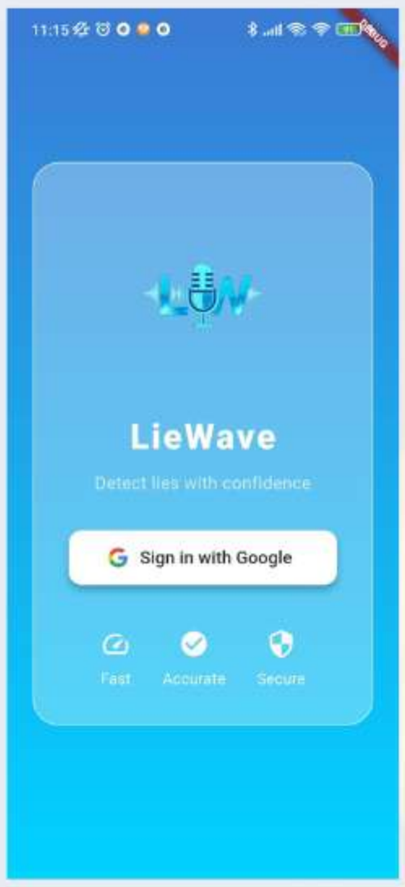


Berkay Üğe

Melih Taşkın



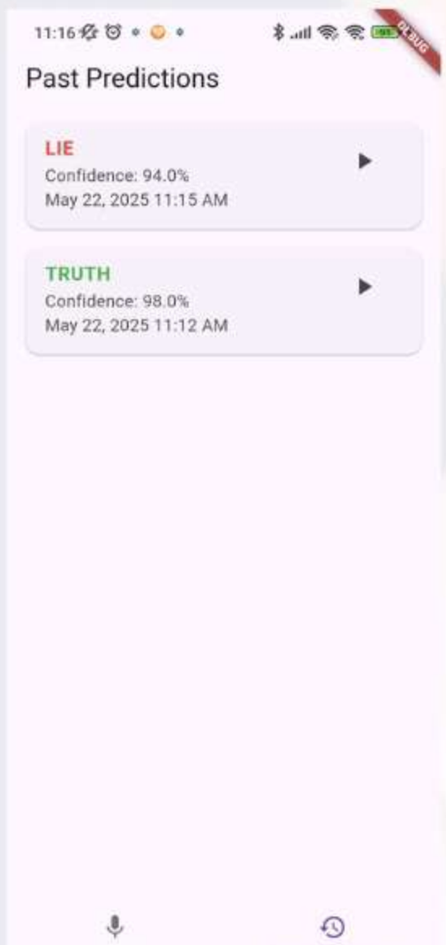


## ABSTRACT

LIEWAVE analyzes speech to detect deception through acoustic, prosodic, and emotional features:

- Pitch variation
- Voice tremor
- Speaking rate
- Energy fluctuations

These features are processed by a CNN-LSTM model to determine the likelihood of deception.




## INTRODUCTION

- Lie detection is essential in security, psychology, and forensic science.
- Traditional polygraph tests are invasive, stress-dependent, and often unreliable.
- LIEWAVE aims to provide a fast, reliable, and non-invasive solution using speech analysis and artificial intelligence.



## CONCLUSION

- Provides accurate, real-time, and non-invasive lie detection
- More reliable than traditional methods
- Future improvements include multilingual support and mobile application integration

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