

# The Future of Card Payments



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# Agenda

**01**

**Emerging Card Technologies**

**02**

**Alternative Payment Methods**

**03**

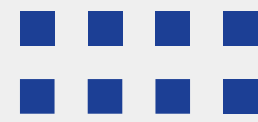
**Benefits of Advancements**

**04**

**Future Trends**



# Emerging Card Technologies

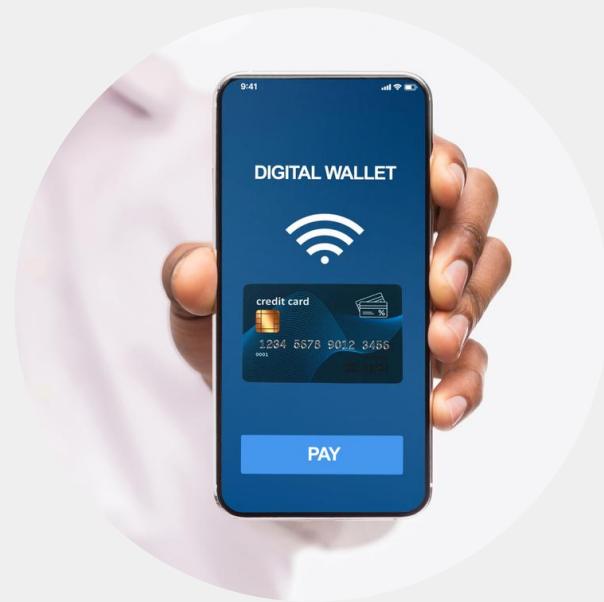


# Contactless and NFC Payments

- Contactless vs. NFC
- Contactless payments started in the late 1990's
- NFC was introduced in the mid-2000's
- Covid-19
- Current adoption rates of contactless payment in the U.S.
- Security improvements



# Digital Wallets and Tokenization



## Digital Wallets

- Launched in the 2010's
- Works by storing your credit or debit card information on your smartphone or other device
- Convenient and secure

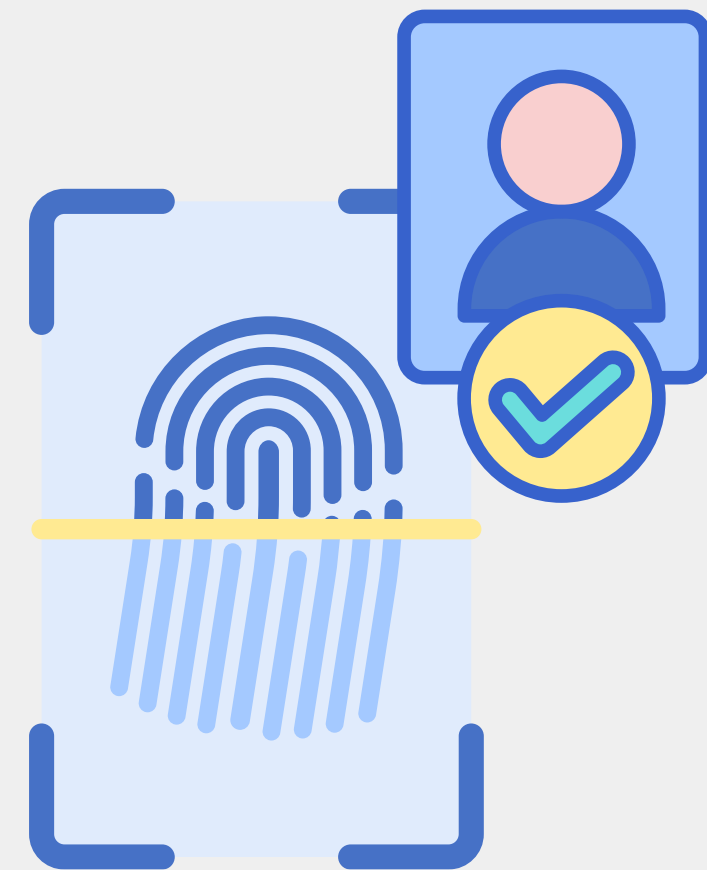


## Tokenization

- The system generates a unique token linked to your card, which is then used for transactions instead of the card details.
- Secure way to protect data

# Biometric Authentication

- A security process that verifies a person's identity through biological characteristics like fingerprints, facial features, iris patterns, or voice, instead of using a password or PIN
- Why use it?
  - Security
  - Convenience
  - Fraud Mitigation
- Examples





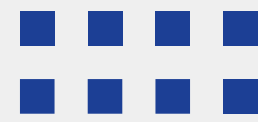
# Biometric Payment Cards

- An alternative way to authenticate cardholders at the Point-of-Sale with a fingerprint instead of a PIN or signature
- How does it work?
- Works with current POS terminals, no need for an update!





# **Alternative Payment Methods**



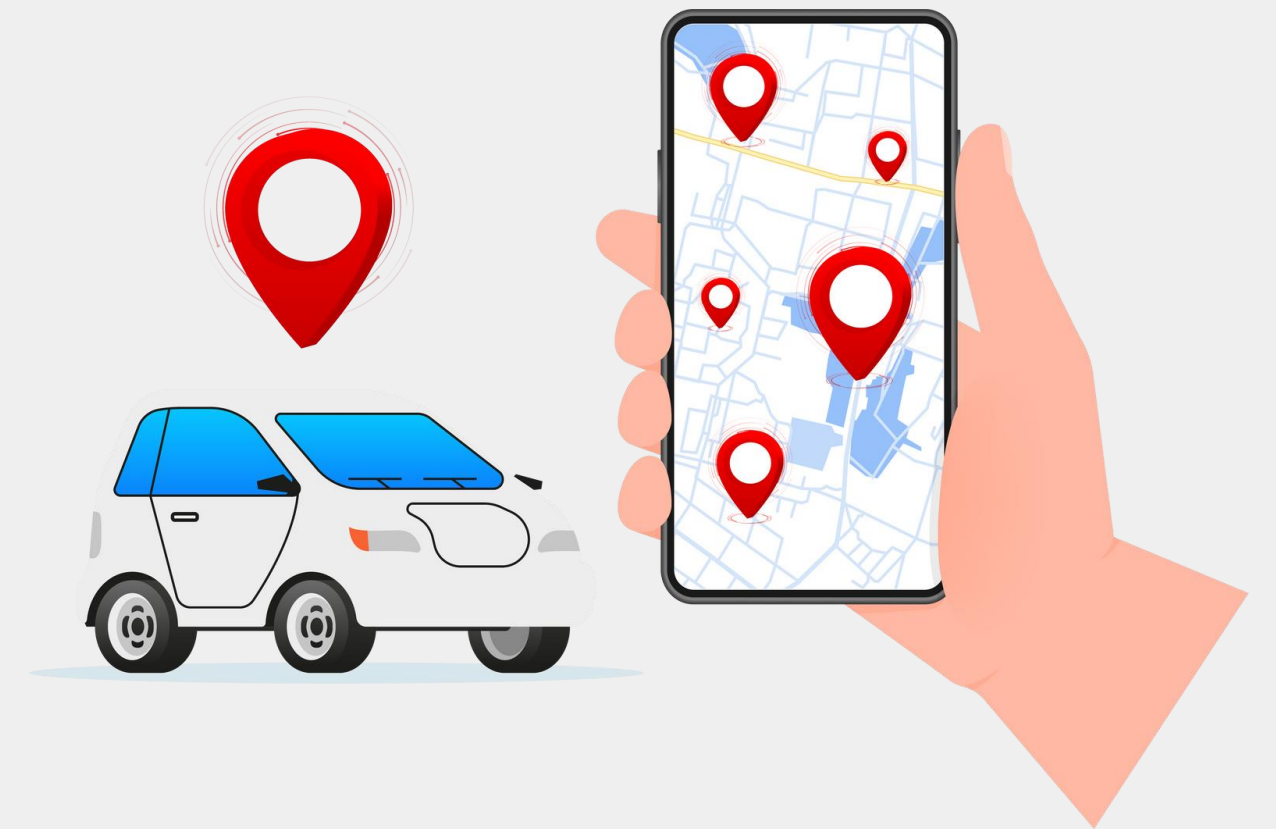
# Buy Now, Pay Later (BNPL)

- Consumers can pay for purchases over time in installments
  - Examples
- Essentially acts as a financing option through the card network's infrastructure



# Embedded Payments

- A payment processing feature that is built into an app or website
- Originated from FinTechs seeking innovation and better User Interface
- Integration into everyday experiences

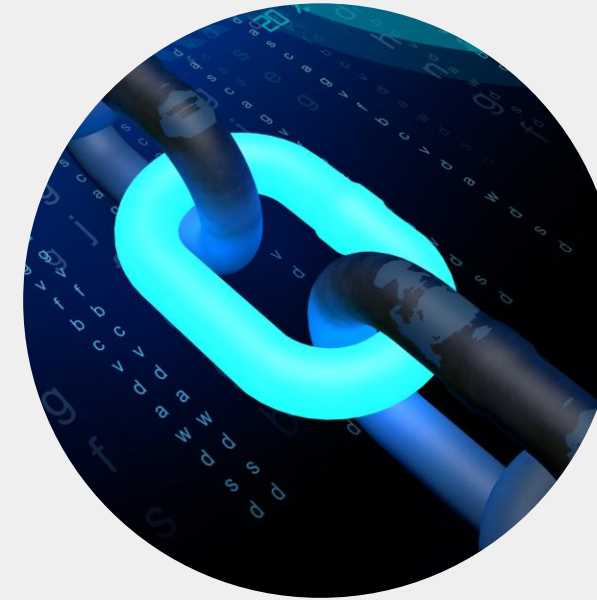


# Cryptocurrency and Blockchain



## Cryptocurrency

- Digital currency that can be used for purchases or investments
- Examples
- Crypto is created and stored on Blockchain

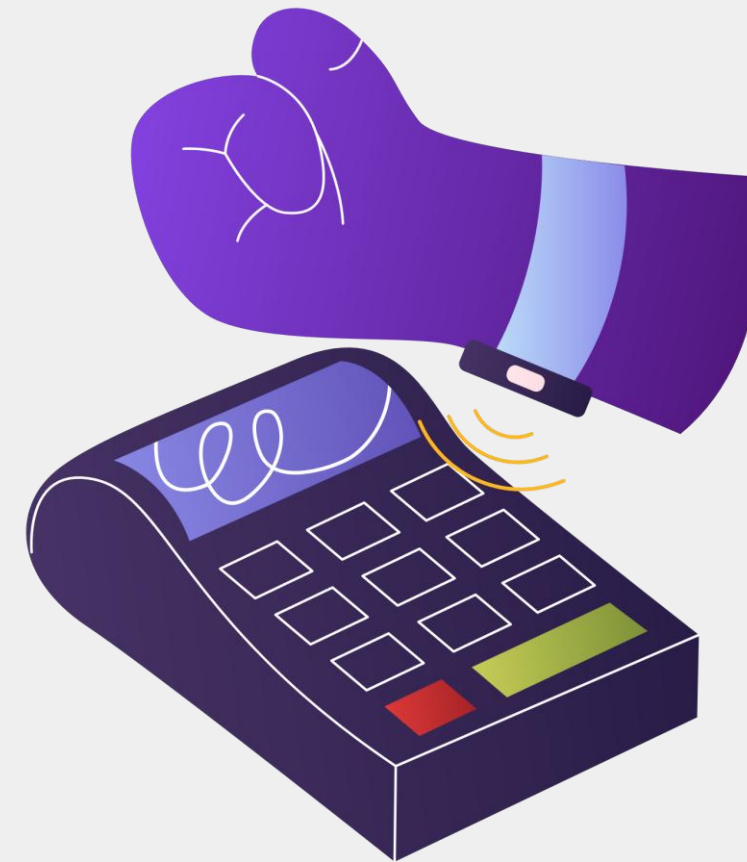


## Blockchain

- Digital ledger that stores and verifies data across a network of computers
- Bitcoin was created using Blockchain, now it is used for a variety of services
- Examples

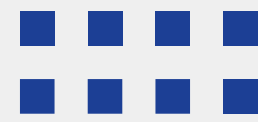
# Wearable Payment Devices

- Accessories that allow the user to make contactless payments
- Security, speed, and convenience





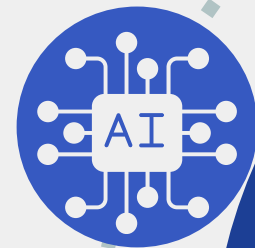
# **Benefits of Advancements**



# Security and Fraud Protection

## AI Fraud Detection

Machine learning analyzes spending patterns to detect anomalies in real time.



## Dynamic CVVs

Changing security codes that make stolen card numbers useless for online fraud.

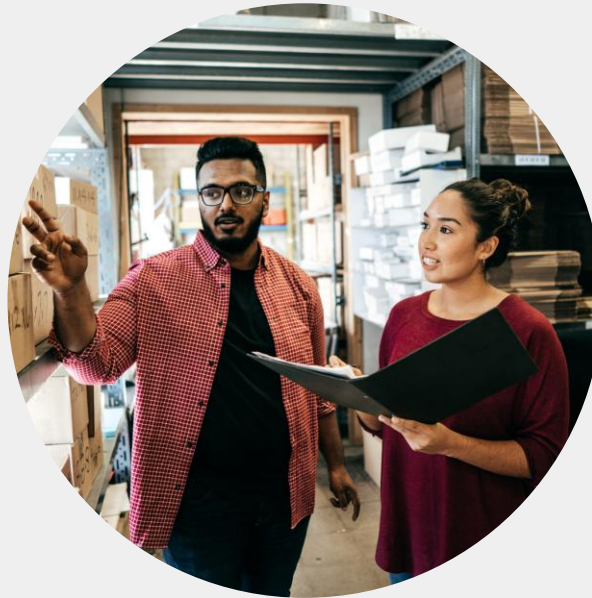


## Multi-Factor Authentication

Layered security measures required for high-risk transactions.



# Benefits for Businesses and Consumers



## Businesses

- Real-time data analytics
- Embedded payments
- Personalized card-based rewards programs



## Consumers

- Faster transactions
- Digital wallet integration
- Subscription management
- Omnichannel payment experience

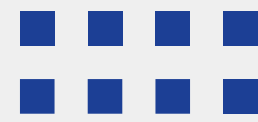
# Expanded Financial Inclusion

- Virtual Cards
- Card-based lending
- Language and Accessibility improvements



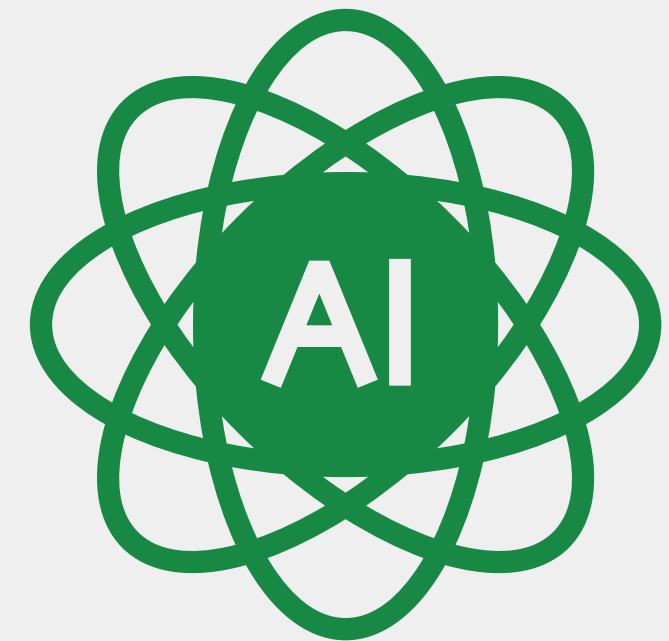


# Future Trends



# AI in Fraud Detection

- AI-driven fraud detection will move to real-time adaptive monitoring.
- Banks and payment networks can use machine learning to create predictive risk models.
- Personalized fraud alerts will evolve, with a focus on reducing false declines and improving user experience



# Invisible Payments and Auto-Checkout

01

Amazon Go

02

In-Vehicle Payments

03

Voice-Enabled Payments via Smart Assistants

# Regulatory Changes

- PCI DSS 4.0
  - Stronger requirements for addressing increasing cyber threats
- The Revised Payment Services Directive (PSD2) in the EU
  - How does this impact the U.S?
- CFPB
  - Protecting consumers and driving competition in card payments



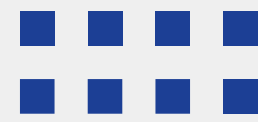
# Sustainability in Cards

- Using eco-friendly materials to make cards
- Digital cards to reduce plastic waste
- Carbon footprint tracking based on card purchases

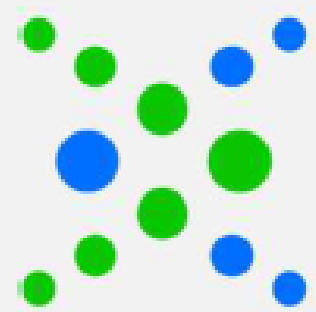




# Questions?

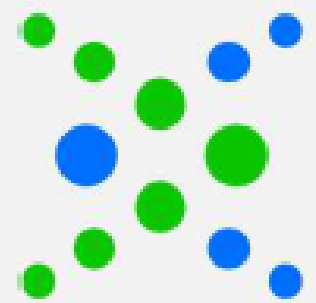






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