From self driving cars to “self operating stores”
AiFi NanoStore: Automated store of future, powered by AI
Agenda:

- A new market opportunity
- AiFi NanoStore
- Powered by AI, 24/7
- The future of retail
Today’s retail stores
RETAIL  n. late Middle English: from Anglo-Norman French retaille “a piece cut off,” from retailier, from re- (expressing intensive force) + tailler “to cut.”

The sale of goods to the public in small quantities for direct use rather than for resale.
VENDING MACHINE:
Imagine a map ... of stores
Serving radius

Vending Machines

Hypermarket

$ sales / day

10 miles

2-3 miles

< 500 ft

$500

$2k

$10k

>$100k
Serving radius

- Vending Machines
  - < 500 ft
- Convenience Store
  - 2-3 miles
- Neighborhood Market
  - 2-3 miles
- Supermarket
  - 2-3 miles
- Hypermarket
  - 10 miles

$ sales / day

- $500
- $2k
- $10k
- > $100k
### Serving radius

- **< 500 ft**
  - Convenience Store
  - Neighborhood Market
  - Supermarket
  - Hypermarket
- **2-3 miles**
- **10 miles**

### Sales / day

- **$500**
- **$2k**
- **$10k**
- **>$100k**

#### Vending Machines
Serving radius

- 10 miles
- 2-3 miles
- < 500 ft

Sales / day

- $500
- $2k
- $10k
- > $100k

Types of retail:

- Vending Machines
- NanoStore
- Convenience Store
- Neighborhood Market
- Supermarket
- Hypermarket
NanoStore: automated store of future, powered by GPUs
FARM STAND:
Ultra-convenient shopping whenever & wherever

University Dorms  Apartment Buildings  Railway station

Office Buildings  Supermarket parking lots  Airports
24/7 satellite stores for supermarkets

Local neighborhoods
Transforming Store Operations

3 - 4 associates manage 10 - 20 nanostores

+ Real-time inventory
+ Theft alerts
+ Out-of-stock alerts
+ Shelf compliance
+ A new line of business
NanoStore Components

Credit card / phone app
NanoStore Components

Credit card / phone app

Dry shelves

Coolers
NanoStore Components

Credit card / phone app

Instant receipts

Dry shelves

Coolers
Sensor fusion = camera system + shelf system
Challenging use cases

- small items (occlusion)
- misplaced items (random)
- fresh produce (weight)
- crowded & cluttered aisles
- theft
### TESLA T4

- **2,560** CUDA CORES
- **320** TENSOR CORES
- **8.1 TFLOPS** 1X PRECISION
- **65 TFLOPS** MIXED PRECISION
- **130 TOPS** INT8 PRECISION
- **260 TOPS** INT4 PRECISION
- PCIe
- **16GB GDDR6** MEMORY
- **320 + GB/s** BANDWIDTH
- **75 watts** POWER

### TESLA P4

- **2,560**
- **-** TENSOR CORES
- **5.5 TFLOPS** 1X PRECISION
- **-** MIXED PRECISION
- **22 TOPS** INT8 PRECISION
- PCIe
- **8GB GDDR5** MEMORY
- **192 + GB/s** BANDWIDTH
- **75 watts** POWER
1 GPU per nano store
Technologists in AI & fusion systems
$1M cash prize among 3 winners;

Best enterprise software startup
Top 1 among 900 teams in US
Can NanoStore be the next big thing?
Learn more at nanostore.ai

Automating the world’s stores