

Engineering Honors Capstone Project

Little Caesars MDP: Pizza Quality Evaluator

Batuhan Akcay

About Me



Graduated in WN2021 from Engineering Honors with a B.S.E in Computer Science



My favorite college experiences were mostly with my friends at UM Taekwondo

Why MDP?



**MULTIDISCIPLINARY
DESIGN PROGRAM**

- Interaction with sponsor companies
- Working together as a team
- Getting hands-on experience



Little Caesars®

Meet Our Team



Kevin Li



Ran Yoo



Nicole Valdespino



Susie Alptekin



Amanda Yao



Batuhan Akcay



Ziyang Ji



MULTIDISCIPLINARY
DESIGN PROGRAM

Sponsors and Faculty



Sponsors:

Tim Somero

Lead Software Development

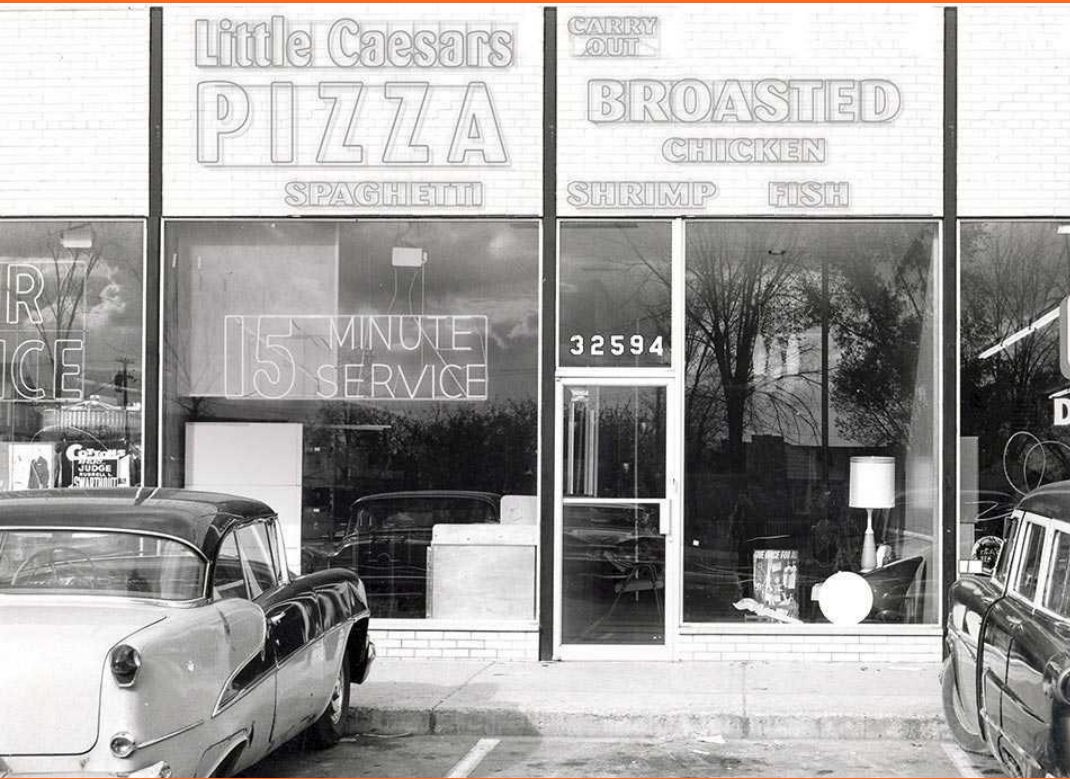
Kevin Hinks

Lead Software Engineer

Faculty:

Brent Griffin

Assistant Research Scientist, Electrical
Engineering and Computer Science



What's behind
Little Caesars?



Serve Others



Own your work



Invent something

**What's behind
Little Caesars?**

VALUES

Motivation

Why?

**Little Caesars
strives to provide
the highest
quality pizza
every time.**





LOW QUALITY PIZZA VS HIGH QUALITY PIZZA



HIGH QUALITY PIZZA VS HIGH QUALITY PIZZA



HIGH QUALITY PIZZA VS HIGH QUALITY PIZZA



PIZZA! PIZZA!

TECHNOLOGY → PIZZA ANALYSIS = HIGHEST QUALITY

The best pizza



Every time

Project Context

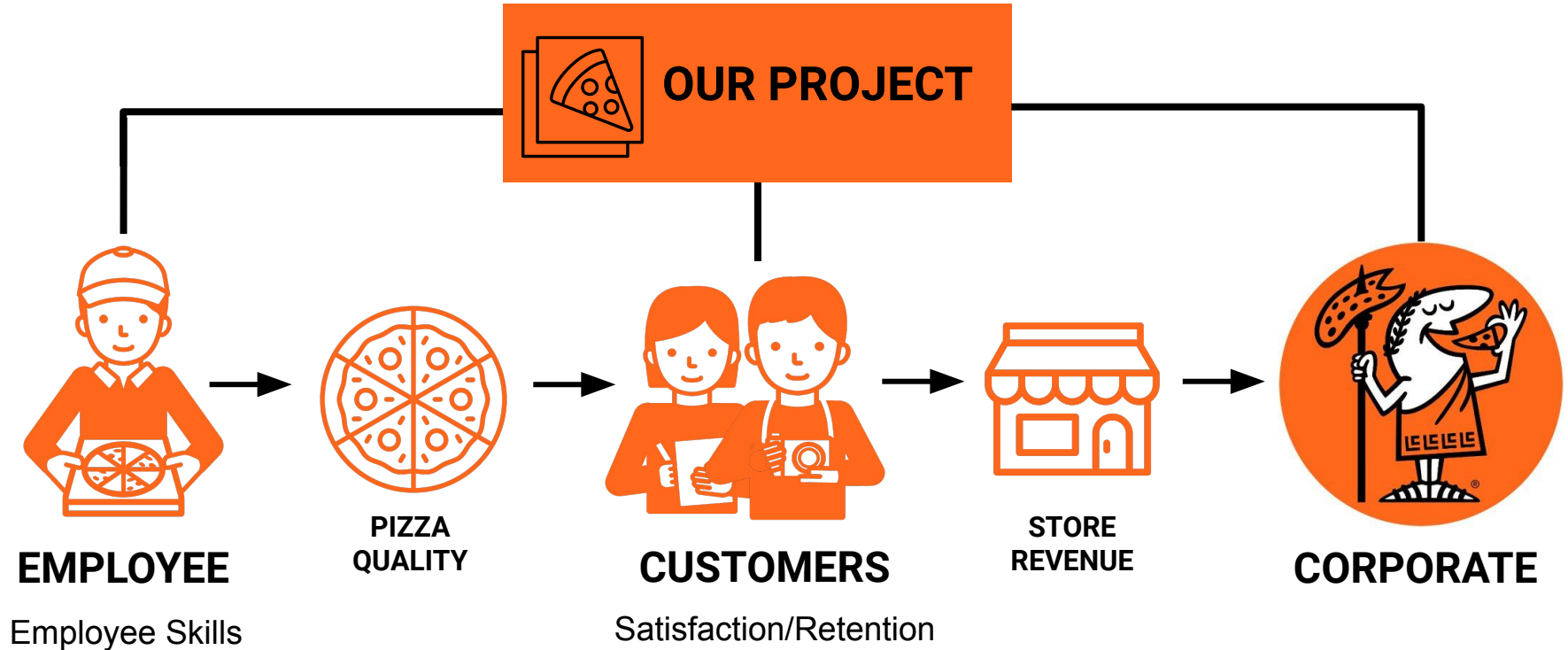
COMPUTER VISION → PIZZA ANALYSIS = HIGHEST QUALITY

The best pizza



Every time

Stakeholders: How our project benefits LCE?



Goal and Objectives

A system to help quantify pizza quality and make perfect pizza consistently



GOAL

Goal and Objectives

- Quantify existing pizza quality standards
- Identify poor quality pizza vs. high quality pizza through pizza images
- Give feedbacks to employees
- Easy to use for employees
- Easy to manage for Little Caesars



OBJECTIVES

Design Phases: Winter 2020

- 1/17 Phase 1:** Start up and Background Research
Milestone: Understand Machine Learning and Computer Vision
- 1/31 Phase 2:** Define Project Requirements and Scope
Milestone: Set expectations with LCE Sponsors
- 2/14 Phase 3:** Data Collection and Augmentation
Milestone: Complete Dataset of Images
- 4/17 Phase 4:** Preliminary Development and Testing
Milestone: Determine System Requirement.
- 4/24**
Milestone: Minimum Viable Product



Design Phases: Fall 2020

- 10/9 Phase 5:** Complete Software Development
Milestone: Gather Feedback
- 10/30 Phase 6:** Final Testing and Redesign
Milestone: Incorporate User and Sponsor Feedback
- 11/20 Phase 7:** Contingency Time and Stretch Goals
Milestone: Finalize Product and Design
- 12/5 Phase 8:** Final Design Presentation and Delivery
12/11 Milestone: Final Product Delivery



My Experience

- Working as a team makes the experience more enjoyable but also brings challenges with it
- Great communication is the key to project success
- Setting appropriate scope and requirements for project is critical
- You can't always meet every requirement and deadline, setting your priorities is very important
- Computer vision is a field that I enjoyed a lot and in future I would like to work more in this field

THANK YOU!

Q&A

