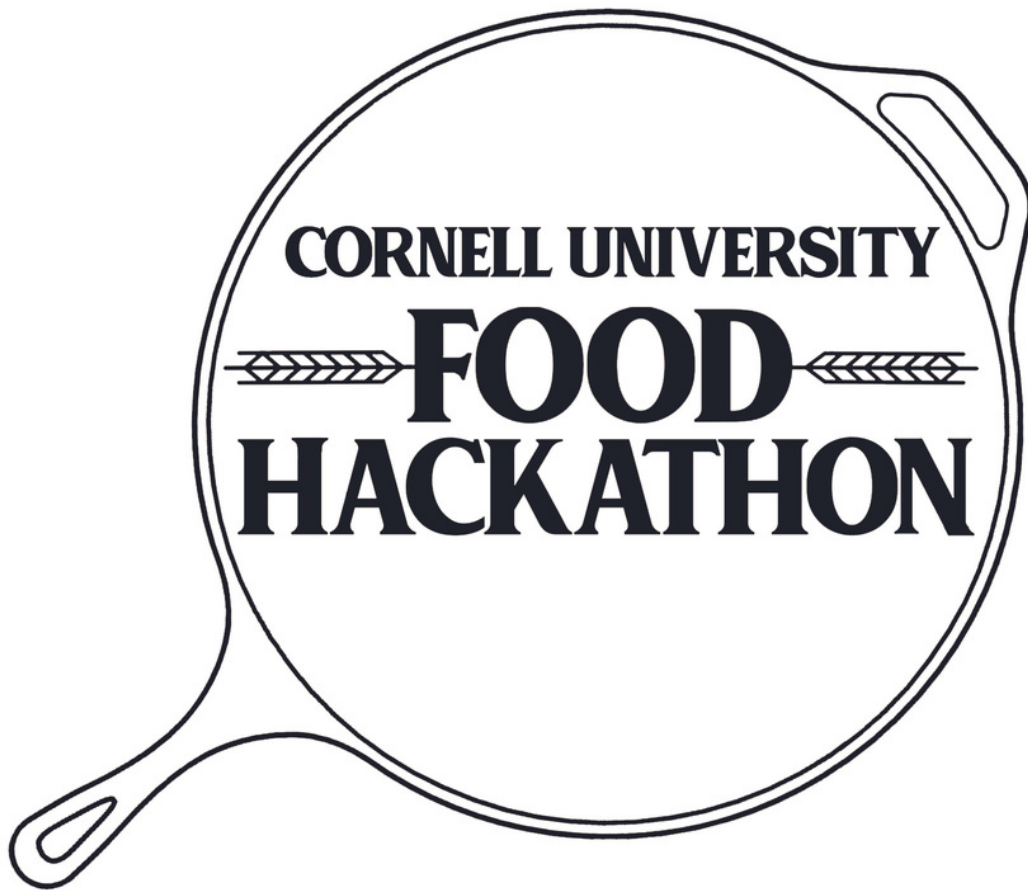


2023



**CIES** CORNELL INSTITUTE  
FOR FOOD SYSTEMS

*in collaboration with*

**ENTREPRENEURSHIP  
AT CORNELL**

# HACK + MARATHON = HACKATHON

A hackathon acts as a catalyst to spur innovation with minimal resources and maximum brain power through a highly facilitated event that exposes students to real-world problems and spurs them to create and prototype possible solutions.

The 2023 Food Hackathon brought together 150 students from diverse degree programs, majors, and every college and school at Cornell! Twenty-two multidisciplinary student teams created and pitched solutions in four focal challenge areas set by our sponsors, competing for \$10,000 in prizes.



## THE PROBLEM

The world population is expected to exceed 9 billion by the middle of this century. Nearly a billion people around the world still suffer from hunger and poor nutrition. Major changes to food production, processing, and distribution systems are needed to ensure people everywhere have access to safe, sufficient, affordable, and nutritious food.

## THE CHALLENGES

### **Agile & Flexible Manufacturing Design**

*Proposed by Schreiber Foods*

Consumer demand in the F&B space is ever-changing and fluctuating. Pandemic-induced shifts in consumption are driving volatility and uncertainty in demand. Yet, scarcity of labor and materials has challenged and slowed the ability of manufacturers to deploy capital expenditures and expand in the model, favoring long production runs to maximize asset utilization. However, the need for flexibility in manufacturing solutions grows increasingly pressing.

### **Develop a Product with Honey & Bee-Pollinated Ingredients**

*Proposed by The National Honey Board*

Honeybees play an essential role in maintaining biodiversity and ensuring plant reproduction. More than 1/3 of calories consumed come from honey bee-pollinated fruits, nuts, seeds, and vegetables. That's 90 different crops that are reliant on beekeepers and honey bees. Teams should develop a new product that contains honey & >50% pollinated ingredients.

### **Reduce Food Loss & Waste In 3rd World Countries**

*Proposed by the Tata-Cornell Institute for Agriculture and Nutrition*

Perishable produce waste is a challenging issue, especially in LMICs where urbanization and higher incomes lead to longer food value chains and increased demand for nutrient-rich foods.

Technology can help reduce FLW, implemented at specific value chain stages or addressing systemic causes involving larger groups of supply chain actors or the broader food system.

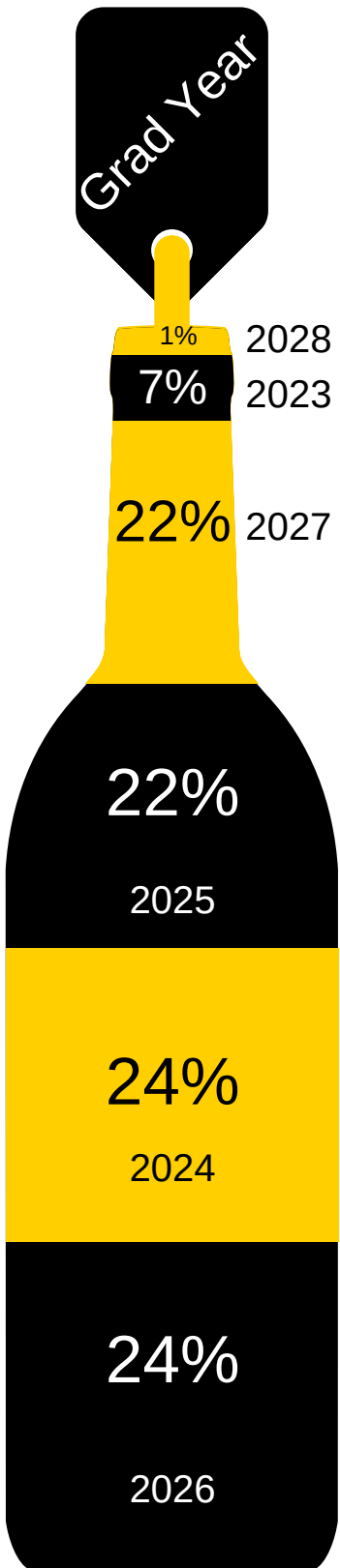
### **Dairy Innovation Regarding Health & Wellness**

*Proposed by Dairy Management Inc.*

Consumers prefer to improve their health and wellness challenges through foods & beverages versus prescriptions & supplements. With dairy's nutritional value, it can be instrumental in helping resolve these issues.

- Grow & Perform
- Healthy Heart & Weight
- Systems Supercharge
- Mental & Emotional Health & Wellness

# THE STUDENTS

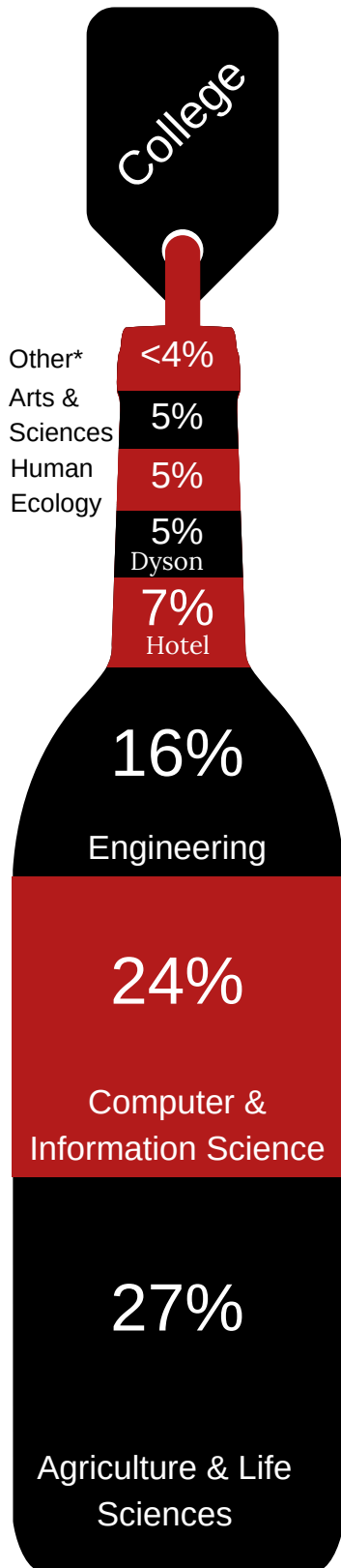


## Degree Facts

Serving 150 Students

% Represented	
BS	54%
BA	16%
PHD	6%
M.ENG	6%
MPS	4%
MPH	3%
MMH	3%
MS	3%
MPA	1%
M.ARCH	1%
MHA	1%
MLA	1%
JD	1%
Exchange Student	1%

**Degrees Represented: 14**



## Major Facts

Serving 150 Students

% Represented	
Computer Science	16%
Food Science	11%
Applied Econ & Mgmt	9%
Hotel Administration	7%
Information Science	7%
Engineering Management	5%
Nutritional Science	4%
Public Health	2%
Agriculture Science	2%
Economics	2%
Biomedical Engineering	2%
Mechanical Engineering	2%
Engineering	2%
Ops Research & Info Eng	2%
Public Administration	2%
Electrical & Computer Eng	2%
Environment & Sustainability	2%
Biological Engineering	2%
Plant Sciences	2%
Architecture	2%
26 Majors with 1 Person	18%

**Majors Represented: 46**

\*AAP, Johnson, Brooks, Law, ILR

### 48% Participation by Women

Students from all of the Ithaca campus colleges and schools participated:

Arts and Sciences (A&S), Agriculture and Life Sciences (CALS), Architecture, Art, and Planning (AAP), Computing and Information Science (CIS), Engineering (ENG), Human Ecology (HUMEC), and Veterinary (VET) as well as The Law School, Dyson School, Brooks School of Public Policy, School of Industrial and Labor Relations (ILR), Hotel School and SC Johnson School of Management.



“Fun!! I was inspired by other people and motivated!”

“I learned how to efficiently communicate and cooperate with teammates.”

“I gained various perspectives from diverse teammates having exposure to different parts of the world gave amazing insights”

“Free food, merch, and mentorship!”

“I learned how to build stronger team bonding skills, experience mentoring, and understand the process of creating a pitch.”

“I saw the creativity and amount of effort my peers put into the competition.”

“I understand the business aspect of product development more and not just the research and development part”

“Meeting folks in different disciplines”

“I learned more about the food science behind fermentation (our idea) and about food from seasoned professionals in the space.”

“I wanted to get an idea of entrepreneurship at Cornell, meet people in the food and have fun creating!”

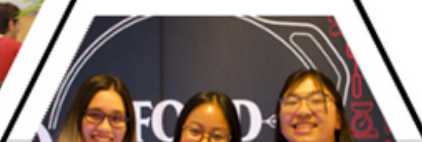
ackathon



“Connections, idea generations, memories”



“Learned some new technical things”





# THE STUDENT TEAMS

## Bad Bees in Business

*A wellness beverage that uses 100% pollination-dependent ingredients and is sweetened with honey*

Joshua Felton CALS-PHD Plant Biology '28  
Ashley Liaw HUMEC-BS Fiber Science '24  
Lanye Luo AAP-M.ARCH Architecture '25  
Austin Montgomery CALS-PHD Food Science '25  
Nicole Szeluga CALS-PHD Plant Biology '24  
Erianti Edward SC Johnson-MBA '24



## Alpha Bees

*A fermented honey beverage with medicinal plant ingredients that educate consumers on bees & nature*

Andria Cao HOTEL-BS '27  
Shreya Chitnavis VET-MPH Food Systems & Health '24  
Pedro Mendoza CALS-PHD Food Process Engineering '27  
Mindy Li CALS-MPS Applied Economics & Mgmt '23  
Holden Hitchcock CALS-BS Plant Sciences '27



## Extremophiles

*Our product introduces good microbes to your fridge, keeping your produce fresh for longer*

Vivienne Lin CALS-BS Applied Econ & Mgmt '26  
Carlene Mwaura ILR-BS '24  
Jessica Zhang DYSON-BS Applied Econ & Mgmt '24  
Liyah Kimotho HOTEL-BS '25  
Kristina Mikhailova CALS-MPS IPS '24  
Akiva Mohebban CALS-BS Animal Science '24



## Harvest Heros

*Helping small farmers in India reduce product waste, and money in the supply chain process*

Saamia Bukhari HOTEL-MMH '23  
Rebecca Chen CALS-MPS Applied Econ & Mgmt '23  
Tong Chen HUMEC-PHD Nutrition '25  
Kushal Digavinti SC Johnson-MS Applied Econ & Mgmt '24  
Chithralekha Rajeev ENGR-M.ENG Engineering Mgmt '24  
Aaliyah Taylor A&S-BA Cognitive Science '25



## Food Forte

*We tackle food delivery waste in India with a marketplace that resells cancelled orders in a bid system*

Shashank Chalamalasetty ENGR-BS MechE '26

Fati Mixha HOTEL-BS '25

Lucas Keith ENGR-BS Biomedical Engineering '26

Prasad Shirode ENGR-MENG Engineering Mgmt '24

Most Disruptive Consumer App



## Yin Yang

*A blend of tea, coffee and honey, a Hong Kong success story re-imagined for a U.S. market*

Omar Karim SC Johnson Exchange Student '24

Jordan Klein CALS-BS Food Science '27

Irene Myung HOTEL-BS '26

Shreemann Raghavan DYSON-BS AEM '25

Sophia Wang HOTEL-BS '26

Most Market Ready



## KimBee

*Ready to use kimchi paste/starter using food waste, honey, and bee pollinated ingredients*

Joel Esparza CALS-BS Food Science '26

Megan Hsieh CALS-BS Food Science '26

Kaylee Yin DYSON-BS Applied Econ & Mgmt '25

Kyra Husen CALS-BS Bio Engineering '26

Ethan Duong A&S-BA Economics '24

Matthew Livingston CALS-BS Food Science '26

Novel Consumer Product



## Prosperous Probiotics

*A fermented, powdered, dry food additive made of nutrient dense retail and farm food waste*

Grace Qi DYSON-BS Applied Econ & Mgmt '26

Davey Seeman A&S-BS Computer Science '27

Rei Shi CALS-BA Agricultural Science '26

Tianai Situ A&S-BS Environment & Sustainability '27

Jeffrey Xue CALS-BS Food Science '27

Christina Rivera CALS-BS Food Science '27

Novel Waste Product







## Entom Elite

*An acheta-protein ice cream using dairy & an alternative, more sustainable protein source*

Alex Eagan ENGR-BS MechE '24  
Sree Ray A&S BA-Econ & Government '24  
Corey Reese CALS-BS Entomology '23  
Marcus Esposito ENGR-BS MechE '24



## HoneySpike

*A mead-based alcoholic drink with similar alcohol by volume as White Claw*

Carolyn Chui Brooks-BS Policy Analysis & Mgmt '26  
Jason Dong ENGR-BS CS '26  
Cathy Miao ENGR-BS CS '26  
Mei Ling Wood ENGR-BS Biomedical Engr '26



## Buzzworthy

*An allergen-free alternative to sugary snacks, made from pectin, apple byproducts, honey & fruit flavoring*

Sophia Warren HOTEL-BS '25  
Jenny Jiang HUMEC-MHA '25  
Raymond Pan CALS-BS Enviro & Sustainability '25  
Sophia Su A&S-BA Economics '24  
Bridgette Webb CALS-MLA '26  
Grace Dunham CALS-BS Global & Public Health '25



## Ritu

*Mobile app & SMS system that forecasts 7-day pest & weather, minimizing disease & crop loss*

Daniel Wang A&S-BA CS & Stats '27  
Steven Yu A&S-BA Computer Science '27  
Anu Koyyada LAW-JD '26  
Jasmine Li ENGR-BS '27



## GrapeSkin

*Upcycling pomace (waste from wine) to create powder-based makeup palettes*

Patti de Cruilles ENGR-BA Bio Engineering '27  
Darian Lee CALS-BS Enviro & Sustainability '25  
Audrey Pinard ENGR-BS Earth & Atmospheric Sci '25  
Sam Rebello CALS-BS Info Science '25  
Anthony Zheng AAP-BA Architecture '25  
Brian Zhu DYSON-BS AEM '24



## Queen Bees

*Gourmet biscuit using local monofloral honey and honey bee pollinated ingredients*

Yueyue Lou HUMEC-BS Nutritional Sciences '24  
Haoqing Shi HUMEC-BS Nutritional Science '26  
Laura Wu A&S-BA Information Science '25  
Jenny Xiao HUMEC-BS Nutritional Science '25  
Zoey Huang HUMEC-BS Nutritional Science '27



## Martha's Food Machine

*A low-tech, cheap method for converting waste into shelf-stable, soil-enriching powder*

Zihua He HUMEC-MPA '25  
Nimra Shakoor ENGR-MENG ORIE '23  
Jisoo Yuk CALS-PHD Bio & Enviro Engineering '24  
Sam Shvets ENGR-BS ORIE, BA Philosophy '25



## Nutri-Sauce

*Pumpkin-based sauce, fortified with vitamins & calcium*

Joaquin Angulo CALS-BS Food Science '26  
Nicolette Gani DYSON-BS AEM '26  
Nicolle Palomino CALS-BS Food Science '24  
Aayush Pande CALS-BS Food Science '25



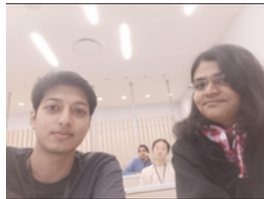
## Curious Cows



*An app to track current food items/stock and to remind families of food expiration dates to reduce over-purchasing and food waste*

Kea-Roy Ong ENGR-BS Computer Science '27  
Anthony Song A&S-BA Computer Science '27  
Huajie Zhong ENGR-BS Computer Science '27  
Eric Zhou ENGR-BS Computer Science '27

## Flaming Foodies



*Solving restaurant food waste by connecting and delivering food to those that need it*

Pranamika Balaji ENGR-M.ENG Engineering Mgmt '23  
Nandan Bhat ENGR-M.ENG Engineering Mgmt '24  
Ketki Churi ENGR-M.ENG Engineering Mgmt '24

## Save Your Bites



*A container that relates the gas emitted by leftover food to the decay-state of the product to prevent waste*

Barbara Batycka Brooks-MPA '25  
Allison Dew ENGR-BS Engineering '27  
Kyleena Xin A&S-BA CS // Info Sci '27  
Brooke Ye ENGR-BS Computer Science '27  
Emily Zhou DYSON-BS AEM '26

## Perpetua



*"All the Whey" is an upcycled energy drink that addresses commercial dairy waste byproducts catering to health-conscious consumers*

Bhavishya Agarwal ENGR-MS Engineering Mgmt '24  
Jian Chen HOTEL-MMH '23  
Ze (Boran) Chen HOTEL-MMH '24  
Darren Liu HOTEL-MMH '23  
Kigen Mera HOTEL-MMH '24

## Food Engine



*Food product dev. accelerator website using AI*

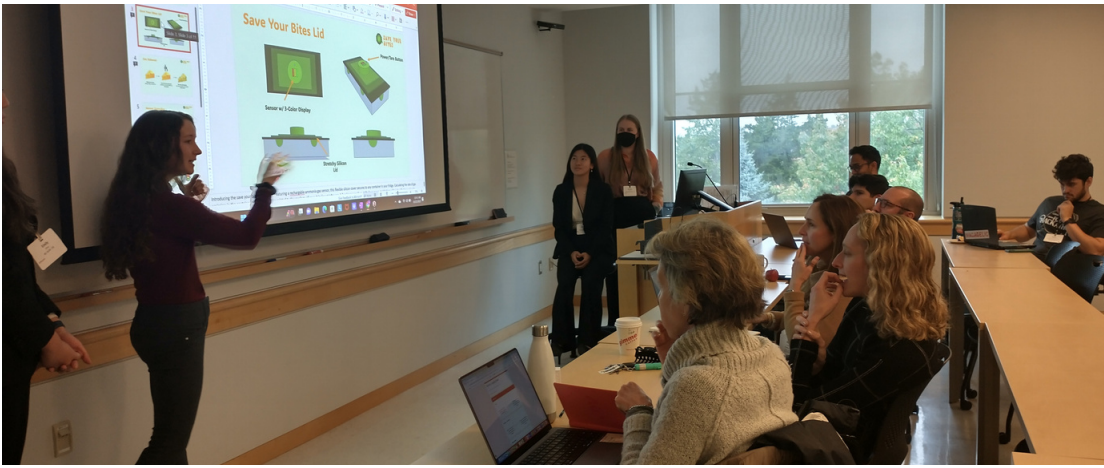
Saumya Desai CALS-MPS Food Science '23  
Anushka Jadhav ENGR-M.ENG Engineering Mgmt '24  
Karishni Mehta ENGR-M.ENG Computer Science '24  
Hansal Shah ENGR-M.ENG CS '24

## Edge Foodify



*A platform that connects farmers with consumers, removing middlemen and decreasing wait time*

Daniel George ENGR-BS CS '26  
Moda Kurma ENGR-BS ChemE '27  
Aly Nathoo ENGR-BS MSE '27  
Anubhav Nigam ENGR-BS Engineering Physics '27  
Aedin Yu ENGR-BS CS '27  
Alex Zhang CALS-BS Info Sci/Comms '27



*focusing on student development -  
team building, ideation, and pitch skills*









## THE CORNELL TEAM



Rajni Aneja, MS, MBA  
Managing Director, CIFS-IPP



Ami Stuart, MS  
Director, Cornell Hackathons



Carmen Moraru, Ph.D.  
Professor & Chair, Food Science



Sam Alcaine, Ph.D.  
Assoc. Professor, Food Science

*A full list of participating industry guests and team mentors can be found at <https://food23mentors.splashthat.com>*

## SUSTAINABILITY



As part of our commitment to eliminating single-use plastics and other disposables, participant “swag bags” contained branded glasses, mugs, and reusable cutlery for use both during and after the event.

**Hackathons**  
CORNELL UNIVERSITY

# SP ON

thank you to our

# SO RS

