The University of Nebraska at Omaha

IT Innovation Cup

Innovations in Micro-Mobility

2019-2020

UNO IT Innovation Cup Guidelines
University of Nebraska at Omaha
2019-2020: *"Innovations in Micro-Mobility"*

Introduction

The UNO IT Innovation Cup is an annual competition for high school students in Nebraska and Iowa High Schools. Schools compete each year to determine who can create the most innovative, creative and best IT-based solution given the current year's problem requirements. For 2019-2020, the challenge area is *"Innovations in Micro-Mobility"* The winning team is awarded the IT Innovation Cup (a traveling trophy) for their school and cash prize of $2,500. Additionally, there will be three $500 prizes for each of three captions. Each high school team can have at least one but no more than three faculty coaches, and each team coach will receive an honorarium of $100 and free tuition to one College of Information & Technology (CIST) IT Professional Development Workshop. All participating students will receive free tuition to one CIST summer workshop and a CIST t-shirt.

2019-2020 Problem Requirements

Public transit can get most people to within a mile of their destination but being able to efficiently move people the final mile to their home remains a challenge. Ride sharing companies like Uber and Lyft have leveraged technology to disrupt traditional taxi services, scooter companies like Spin and Lime offer a way to get from A-B in an efficient manner for short distances. Bike rental programs like Heartland B-Cycle allow people to get access to a bicycle as long as they begin and end their journey at a docking station. Finally, the advent of autonomous and driverless vehicles promises to change the way we travel if their technical challenges can be overcome.

Your challenge is to leverage any of the existing services or create something new to create a single service that looks at solving the last mile problem.

Teams should create a compelling solution that meets the identified need, through a series of project milestones:

1. Initial Pitches
2. Finalized Pitch & Promotional Video
3. Initial Technical Demo & Paper
4. Initial Business Plan

The project must result in a useful, IT-based solution and must be communicated in a variety of media including written papers, oral presentations, and online project portfolios. The solution needs to include new or novel software development, hardware configuration, and/or system setup.

Available Resources

All teams will be assigned a mentor from current UNO IT Innovation Collaborative students. These mentors will offer guidance, encouragement, and assistance for each team. The mentors may not provide direct development work, but can assist with idea generation, debugging and

problem solving, and clarifications of guidelines. They can also provide feedback on videos, papers and presentations prior to submission.

We will also provide a sample list of known web services and APIs. This will not be comprehensive, but should give teams a place to start. Teams are encouraged to look for other web services or ways to utilize these in novel ways.

Materials (hardware, etc.) for projects will be reimbursed up to $200 per team and itemized receipts are required for these reimbursements. Reimbursements should be requested from Janice Fink (jfink@unomaha.edu). Upon request we will provide scheduled access to PKI computer labs, and will coordinate with the UNO Speech Center for any help required for presentation development.

Finally, all teams may have at least one but no more than three faculty members from their high school to serve as coaches, but all software, artwork, multimedia presentations, music, etc. must be performed by the high school students. Faculty coaches can provide basic debugging help and advising, but not code or development. Any team that is determined to have active development work from a faculty coach will be disqualified.

Judging Criteria
All of the points for the final submission will be determined at the final presentation. The milestone check points must be completed on time to be eligible for final awards. The milestone submission will be used to provide feedback and guidance to the teams from UNO faculty and IT Innovation students.

Teams will submit their final reports & business plans in advance of the final presentation. This will allow our expert and industry judges to have the opportunity to read and prepare questions prior to the presentation. The final points will be generated from this document and the final presentation.

Key Dates
- October 11, 2019 – Email of Intention to Compete Due
  - RSVP for Kickoff (In-person or webcast)
- October 29, 2019 – Kickoff Event and workshop at PKI
- November 18-22, 2019 – Initial Pitches
  - Scheduled time in person or via video conference
- December 20, 2019 – Finalized Idea Submission
- February 7, 2020 – Initial Technical Demo
- March 13, 2020 – Initial Business Plan
- April 10, 2020 – Final Report & Business Plan Submission
- April 24, 2020 – Demonstration presentations and awards
  - PKI
    - 10:00 AM – 3:00 PM Judging & Demonstration
    - 5:00 PM Awards

Eligibility
- For 2019-2020, competing high schools must be in Nebraska or Western Iowa

University of Nebraska Omaha

- Each high school can have multiple teams but each participant can only be on one single team.
- Each team must consist of no more than ten students, not including faculty coaches
- Diverse teams are encouraged; a great team will usually involve artists, programmers, project managers, marketers, etc.

How to Enter

To apply, student teams must submit a brief email to dvbabb@unomaha.edu by October 11, 2019. The email should state:
- The high school the team represents
- Contact information of the faculty coaches
  - Full name
  - Best contact phone number
  - Best email address
- For each student team member:
  - Full name
  - Email address
  - Expected graduation date
- The number of the student team members that plan to attend the workshop on 4 November.

Team Members

In the initial email to enter the competition, the members of the team must be identified. However, new team members can be added until the final idea submission in December. Teams cannot have more than 10 student members and no more than 3 faculty coaches. After February 7, 2020, teams cannot add new members, but team members can be removed. In order to remove, add, or replace a team member, a team must notify the IT Innovation Cup committee of the desire to remove, add, or replace a member and then receive an email confirmation from the IT Innovation Cup committee that the team structure has been updated.

Submitted Materials
- Email of Intention to Compete Due
  - This will be an initial e-mail with the school, coach(s) and how many teams will be competing from that school.
- Initial Pitches
  - Either in-person or via web conference.
  - Teams will pitch up to 3 ideas and get feedback on each idea from IT Innovation faculty and students.
  - Teams are free to choose any idea related to the theme.
- Finalized Idea Submission
  - This will be a short writeup of the solution the team has selected along with a video similar to a Kick Starter product pitch.
  - We will provide a template closer to the submission date.
  - Written report should include a comparison to similar products/services.
  - Submission should also identify the group of people who will be most impacted by this innovation.
- Initial Technical Demo

- Video presentation of the technical work being done on innovation.
- Supplemental materials should also be submitted (code samples, hardware configurations, etc.)
- Initial Business Plan
  - We will provide a template closer to submission date.
  - How does your innovation turn into a company or money-making endeavor?
  - What is your fee/pricing structure?
  - What are the costs associated with your innovation?
- Final Report & Business Plan Submission
  - Template provided
  - Based on all of the earlier submissions and feedback.
  - Documents your innovation journey with technical details, photos, early prototypes, and final designs.
  - Business plan is developed.
- Demonstration presentations and awards
  - In-person presentation of innovation and business plan to judges.
  - Judges will have read your final report prior to event.
  - Demo of any technology you've implemented in your innovation.
  - Trade-show style table presentations for public, UNO faculty, and judges.

Prizes
- **Grand Prize** - Best project overall based on the judging. Team will receive $2,500 and a traveling trophy.

Caption Awards - The grand prize winner is not eligible for the caption awards. Each caption award comes with a $500 prize. A team may win multiple caption awards.
- **Best Technical Innovation** - Team that produced the most technically sophisticated product. This will recognize the best team in terms of programming, hardware, or other technical skills.
- **Best Business Plan** - Team whose project would be most likely to actually be a successful business based on their business plan. This team will have the most robust plan for projecting revenues, costs, and time to become a viable business.
- **Biggest Overall Impact** - Team whose project would have the most impact on the targeted group if it were successfully implemented. IT Innovation is really about helping people and communities through technology and not interested in developing technology for its own sake.

Scholarships
Any participant in IT Innovation Cup is eligible for a scholarship. Scholarship is only for IT Innovation majors. There will be four students selected for a $1000 scholarship, renewable for up to two years of successful participation in the IT Innovation degree program at UNO for a total possible value of $2000.

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