

App Development with Higher Ed

Chris Rider

riderc1@nku.edu

May 17, 2016

Introducing the Center for Applied Informatics

- Northern Kentucky University (NKU)
- What is the CAI?
- Virtual Co-op Program
- Skills learned
- Emerging technologies
- Awards

Where is NKU?



- 10 minutes south of Cincinnati OH
- Founded in 1968
- About 15000 students
- NKU graduates fulfill about 65-75% of IT talent in the Cincinnati region

What is the CAI?

- The CAI is the Center for Applied Informatics, part of the College of Informatics (COI) at Northern Kentucky University (NKU)
- It is the outreach arm of the COI. It draws upon student and faculty expertise from Business Informatics, Computer Science, Communication, and beyond
- The CAI brings together IT leaders from across the region in its IT Leadership Forum
- Above all, the CAI features a unique and high-impact virtual co-op program, in which students develop websites, apps, and analytics work for organizations around the world.
- Our students help to bridge the IT Talent gap by providing experiential learning opportunities to the students.

Virtual CO-OP Program

- Provides solutions for organizations and experience for students
- Students typically work 20-25 hours a week on campus using NKU provided resources
- Professional staff manage the projects and students
- Projects include developing websites, mobile, and most recently, analytics projects



Skills Learned

- Technical Skills
 - Web: PHP, CSS, JavaScript
 - Mobile platforms: Android, iOS
 - SharePoint, .NET
 - Database development
 - Analytics
- Soft Skills
 - Communicate with a project manager
 - Communicate with clients
 - Understanding project requirements
 - Collaboration
 - Project deadlines



Emerging Technologies

- Virtual Reality
 - Oculus Rift
- Augmented Reality
 - Microsoft HoloLens
 - Google Glass
- Beacons
- Raspberry Pi
- Internet of Things
- Amazon Echo



Industry and Regional Recognition

- National Educational Peer Recognition
 - The American Association of State Colleges and Universities (AASCU) Excellence and Innovation award October 2014 for Regional and Economic Development
- State/Regional Recognition
 - Best of Kentucky Technology Awards - PulsePoint
 - ComputerWorld's Premier 100 IT Leader Award
- Student Recognition
 - Connect Kentucky Post Secondary Student Technology Award
 - 2013 – Bobby Crawford, 2012 – Trevor Schmitz



PULSEPOINT

San Ramon Valley Fire District

- In 2009, the San Ramon Valley Fire District (SRVFD) wanted a mobile app to keep the public informed about what the fire department is doing.
- Apple referred SRVFD to NKU – NKU was one of the first universities developing mobile apps.
- The partnership produced a mobile app in about a year.
- For version 2.0, the app was integrated with the computer aided dispatch system used by SRVFD.
- This was the prototype for the PulsePoint app.

How did we work together?

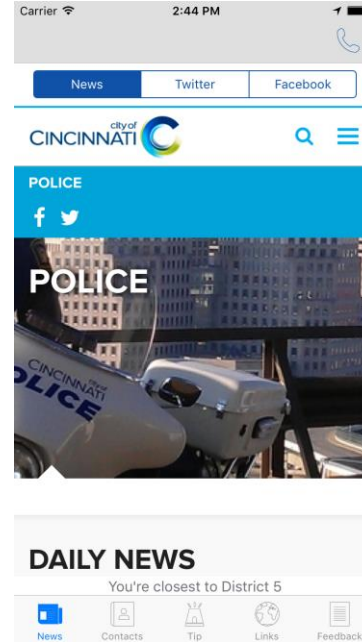
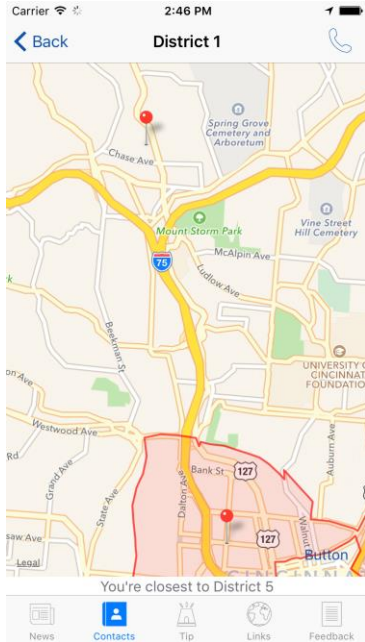
- All communication was done via email and Skype. NKU students did not visit San Ramon for version 1.0.
- For version 2.0, we did visit San Ramon to do testing of CAD integration and how much battery life the GPS was consuming.
- By using student talent, the costs of the project were much more affordable than working with a professional development company.
- The prototype made it easier for the PulsePoint Foundation to raise additional funds and take the project nation-wide.

CINCINNATI POLICE DEPARTMENT

Cincinnati Police Department

- In 2015, the CAI began working with the Cincinnati Police Department to develop a mobile app for the public.
- The app allows citizens to:
 - Report a crime
 - Provides phone numbers/email/web URLs
 - Information on police districts
 - News related to the CPD
 - Easy access to social media used by the CPD

CPD App



SWISS FIRE DEPARTMENT

iFIS

- Shortly after the PulsePoint app launched, NKU received considerable publicity for our role in developing the Fire Department app.
- A Swiss consulting company contacted the CAI to develop an internal app for Swiss fire fighters.
- The project lasted about 3 years
 - Additional features added
 - Web site developed to show the incident map in the command centers
 - Integration into existing IT systems such as the employee time tracking system

iFIS app features

- Internal app for fire department personnel
- View fires/incidents
- Employee absence records
- Google Maps showing incidents
- CPR response (similar to PulsePoint, but only paramedics/fire fighters are using the app)



WHERE TO START?

Define your project

- What is the purpose of the app?
- Who is the target audience?
- What platforms?
- Do you have a budget?
- One of the hardest parts of a project:
 - How to integrate with your current technology?

Pitfalls (for any project!)

- Feature creep
 - Kills your budget
 - Invalidates your original timeline
 - Will likely frustrate both teams
- Not involving your IT team early on
 - You might not be able to access some of your resources
 - IT might point out security/privacy concerns
 - IT staff can work with the developers
 - Vendors might need to be involved
- Plan on maintenance
 - There will be bugs to fix after v1.0
 - You might want to think about updates to the app

Pitfalls Working with Higher Ed

- Not a consulting company
 - 24x7 support probably not an option
 - Make sure the contract specifies who owns the intellectual property
 - Timelines – is it a class research project? What happens over the summer when school is out?
 - Support – what happens after the development phase is over?
- Built-in “churn”
 - Students graduate, change majors
 - How is knowledge turnover handled?
 - Does your staff take over at some point?
 - How much turnover documentation do you need?

Benefits of working with Higher Ed

- Access to researchers
- Typically not seeking profits
 - Not a vendor pushing their latest product
 - Probably not tied into a long term contract
- Affordable way to develop a minimal viable product (MVP)/prototype
- Helping give experience to the next generation of IT workers
 - Great way to meet students
 - Possibly a future employee of your organization

Questions?

- Contact: Chris Rider, riderc1@nku.edu
- Web: <http://cai.nku.edu>