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Dublin High sophomore creates bus-tracking app
Through coding, Liam O'Flynn says, 'everybody has the ability to solve everyday problems'

by Erika Alvero

Anyone who has taken a school bus -- or any bus for that matter -- is well-acquainted with the unpredictable schedules of that mode of transportation.

This unpredictability served as the inspiration for Dublin High sophomore Liam O'Flynn's bus tracking app. The "Tri-Valley Buses" app allows local residents to track the progress of Wheels and Rapid buses on their smartphones.

"There would be times when the bus would show up late," O'Flynn said, leading to "obviously negative repercussions."

"Then I'd have to contact my parents or grab my bike and quickly bike to school."

So the coding enthusiast decided it would become his next project.

O'Flynn started coding in earnest in fourth grade, when he wrote his first program in Java -- an address book. He took some foundational coding classes and his father's own technological career helped spur his interest, but he was mostly self-taught, the teen said.

What continues to draw him to coding is how it allows him to tackle problems he confronts in everyday life.

"One thing that really appealed to me about coding is that everybody has the ability to solve everyday problems with applications," he said. Everyday problems such as bus arrival times and scheduling.

The Livermore Amador Valley Transit Authority (LAVTA) already has a bus-tracking website, but O'Flynn said it was difficult to use on mobile devices, particularly when considering that many bus-riders would need to access it via their phones while in-transit.

"A website in this day and age isn't the most accessible," O'Flynn said.

So to craft the app, he reverse-engineered the website's code. Using LAVTA's "General Transit Feed Specification Realtime data" (data gathered from transit systems that is also used by Google Maps), he converted the information into language readable by mobile devices.

He began working on it as a freshman late October 2016 and ironed out a few glitches the following month -- the last Android update was made on Nov. 21, 2016.
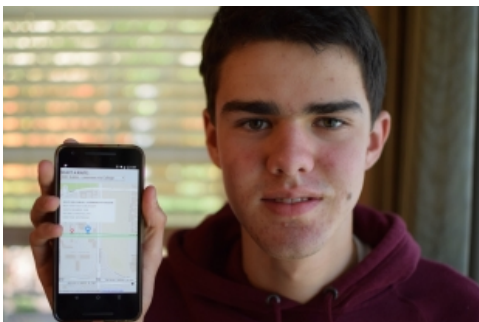
In order to use the app, a user can choose a specific Wheels or Rapid route, and a map will display every bus stop on the route and the location of every bus traveling on the route. After tapping a particular bus icon, the app will give the viewer the vehicle number, direction of travel and on-time status.

The app now has almost 200 downloads by Android users, and nearly 300 by iOS users (75 this month after Wheels put out a press release about the app, his dad Paul O'Flynn said). He himself uses it every day as he heads out to school, and his friends that use it have reported timely success.

This is just one of his coding projects -- O'Flynn's other projects range to include a variety of topics, from interactive mapping websites to a website that tracks tree-planting in low-income communities, at times working with nonprofits or larger organizations.

The "Tri-Valley Buses" app is available for free download for both Android and iOS devices.

Photos

Liam O'Flynn, 16, created an app that would allow Tri-Valley bus-riders to track the exact location of Wheels and Rapid buses on their mobile phones. (Photo courtesy of Paul O'Flynn)