Ryde Carpool: Analyzing Student Travel Trends

CAL POLY
LEARN BY DOING

Emily Gavrilenko: Computer Science, College of Engineering

Ryde Carpool is the social carpooling marketplace that connects college students and enables them to buy and sell seats in each others' cars. This project investigates where students travel and how they discover and interact with the carpooling marketplace.
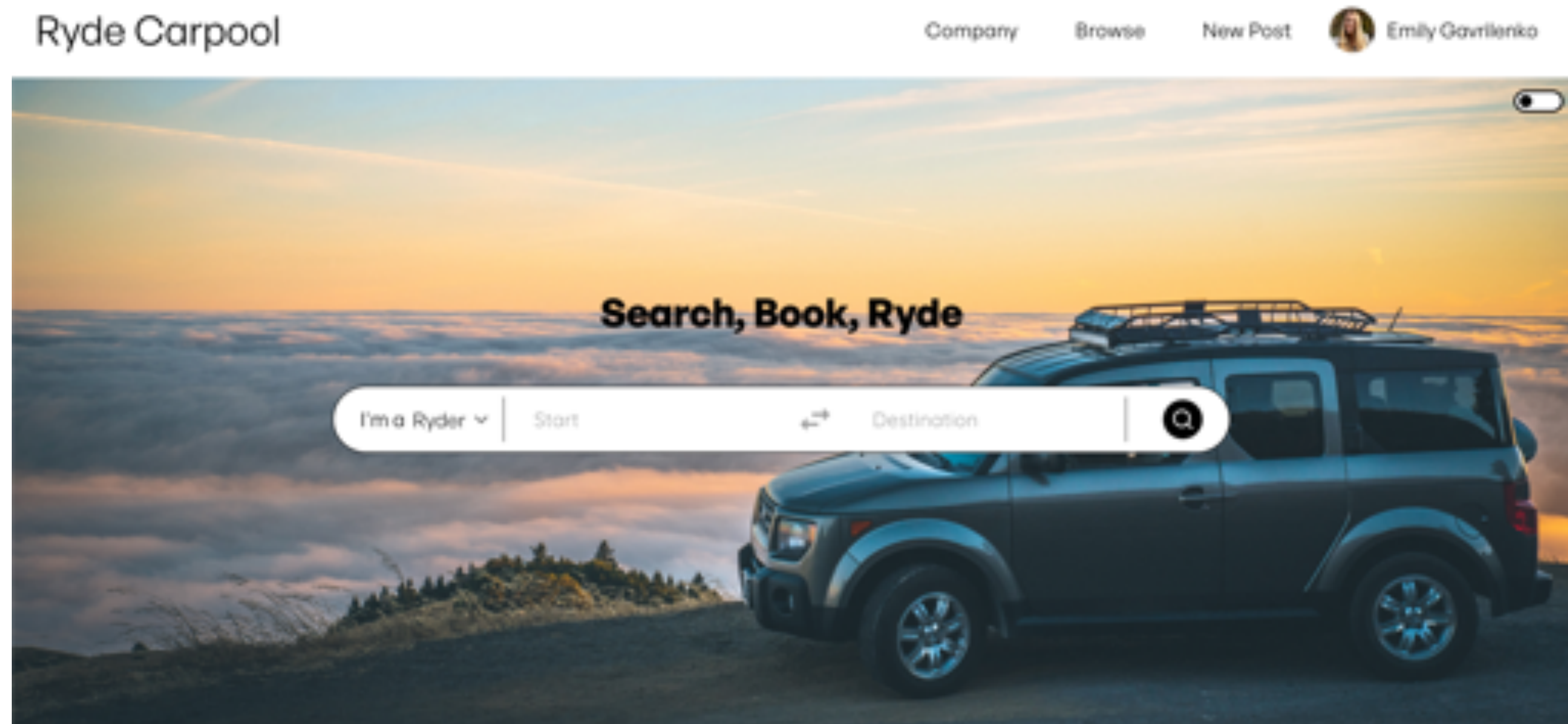
Landing Page for the Ryde Carpool Website

Student Travel

College Student Demographic

In the United States, there are 19.4 million college students and 51% of them don't have a car on campus. 78.5% are attending college in-state and live within driving distance of their hometowns. [1, 2, 3]

In a survey of 382 California students, 60.6% indicated they travel outside of their college city at least once a month and 73.3% say they feel safe traveling with other students. Respondents live an average of 250 miles from home and 55.5% indicated they would travel more if carpools were more readily available.

Ryde Carpool

Ryde Carpool is a web-based carpooling marketplace that enables the buying and selling of empty car seats for students. This allows drivers to recoup their cost of travel while providing ryders the opportunity to travel hundreds of miles within a college budget. Since launching Ryde Carpool on March 15th, there have been 231 user signups and 115 rydes posted on the site.

Transportation accounts for 52.2% of Cal Poly's greenhouse gas emissions and 94% comes from commuter travel [4]. Those numbers exclude students' emissions while traveling on weekends and returning home during break. Ryde Carpool seeks to minimize individuals' and organizations' impact on the environment and helps them meet their sustainability goals.

Data Analysis

Travel Destinations

Ryde Carpool is currently serving Cal Poly students and travel hotspots have shown up around the Bay Area and Los Angeles. 22,160 total miles have been posted with 47 students traveling north, 52 students traveling south, and 16 students traveling in a 20 mile radius around Cal Poly.

Drivers and ryders have similar posting habits for long distance travel (>200 miles), but drivers have more short distance and ryders have more medium distance posts. This may be due to drivers wanting to avoid the inconvenience of picking up and dropping off passengers for medium distance trips, and ryders not being as desperate for shorter distance travel as alternate transportation options are more accessible and affordable.

Website Interactions

56.4% of site visitors used a mobile device, reinforcing the push for building a mobile application. Additionally, 70.5% of users heard about the site through various social media platforms such as Facebook, Instagram, Reddit, and LinkedIn. A visible spike is seen during the weekend of May 13-15 when Ryde Carpool partnered with two music venues.

Future Work

There are more than 50 university Facebook Rideshare groups across the US that students use to post ride offers and requests. These groups have been around for more than a decade and have a combined average of 9,200 rides/month. The next step of this research will be to extract, process, and analyze these ride posts for further understanding of student travel habits.
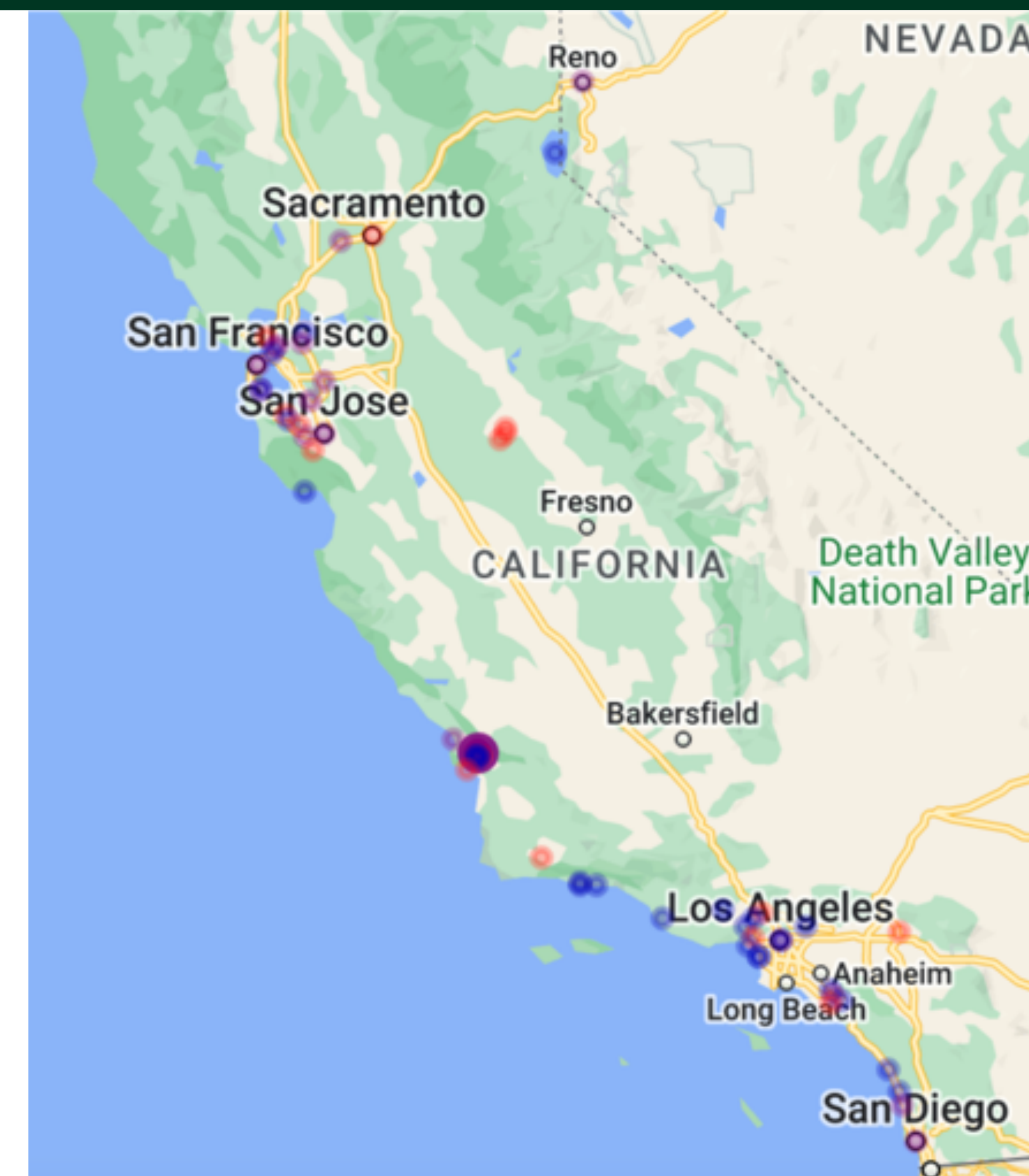

Figure 1: Travel Locations
Red markers indicate a student's start location, blue markers indicate a travel destination, and purple markers designate locations that are both origins and destinations for student travelers.
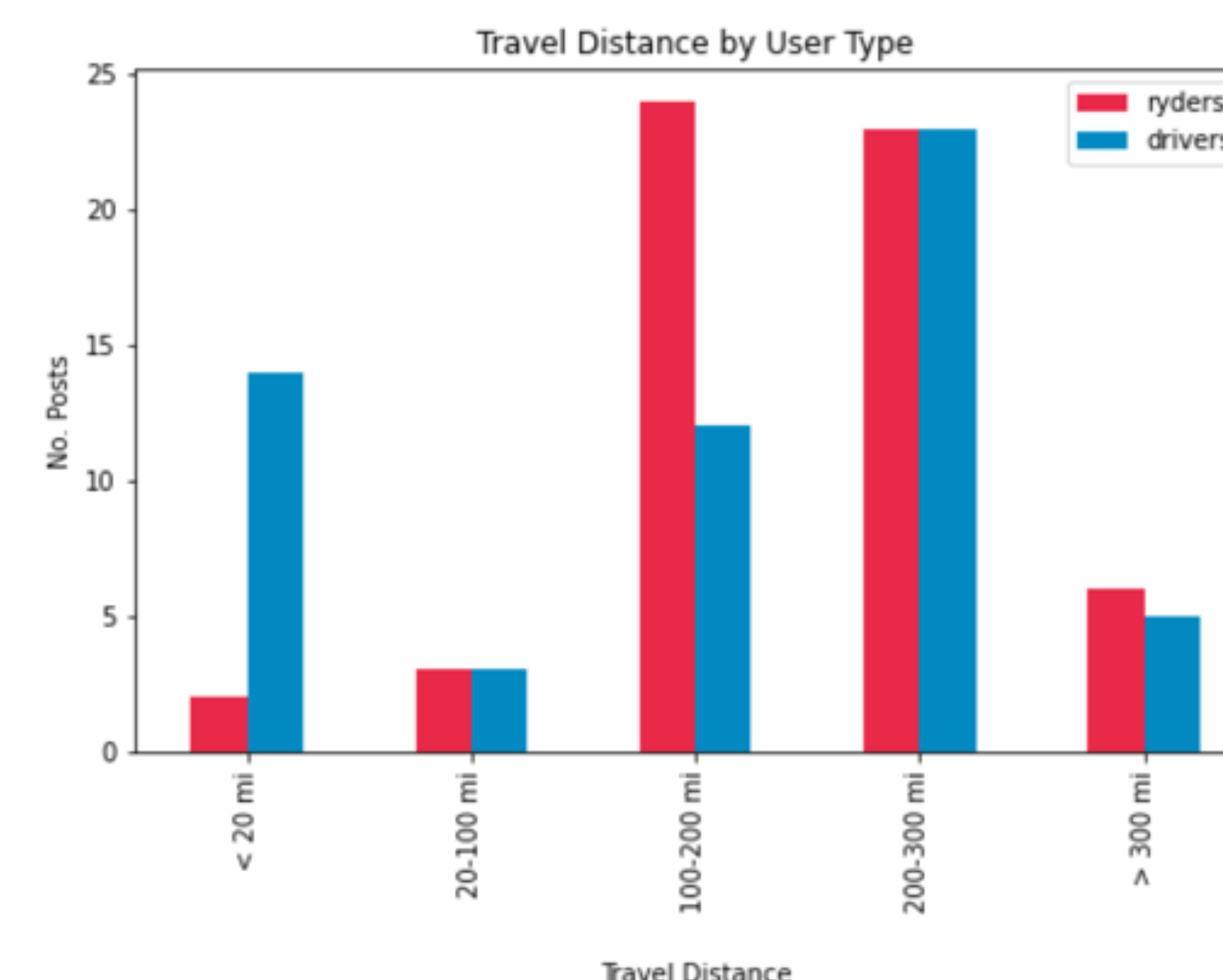

Figure 2: Travel Distance by User Type
Students predominately carpool for medium to long distance travel ranging between 100-300 miles. Drivers post more for short distance drives while ryders post more for medium distance travel (100-200 miles).

Direction	Count
South	52
North	47
Short Distance	16

Figure 3: Direction of Travel
The number of students traveling North and South from Cal Poly is fairly even. 13.9% of students used Ryde Carpool for trips less than 20 miles.
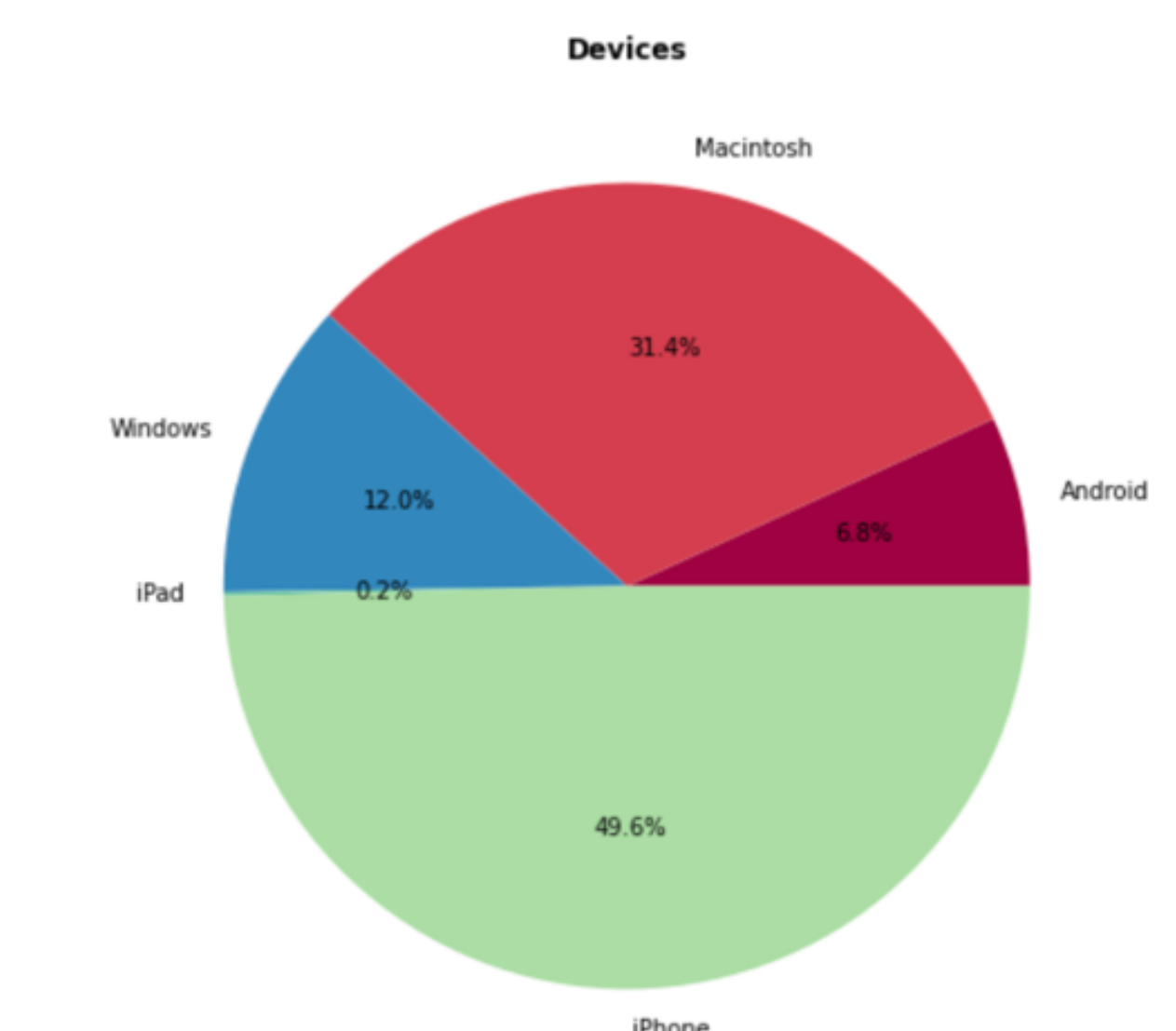

Figure 4: Site visits by device
56.4% of Ryde Carpool users visited the site through a mobile device, reinforcing the idea that users would benefit from a mobile app.
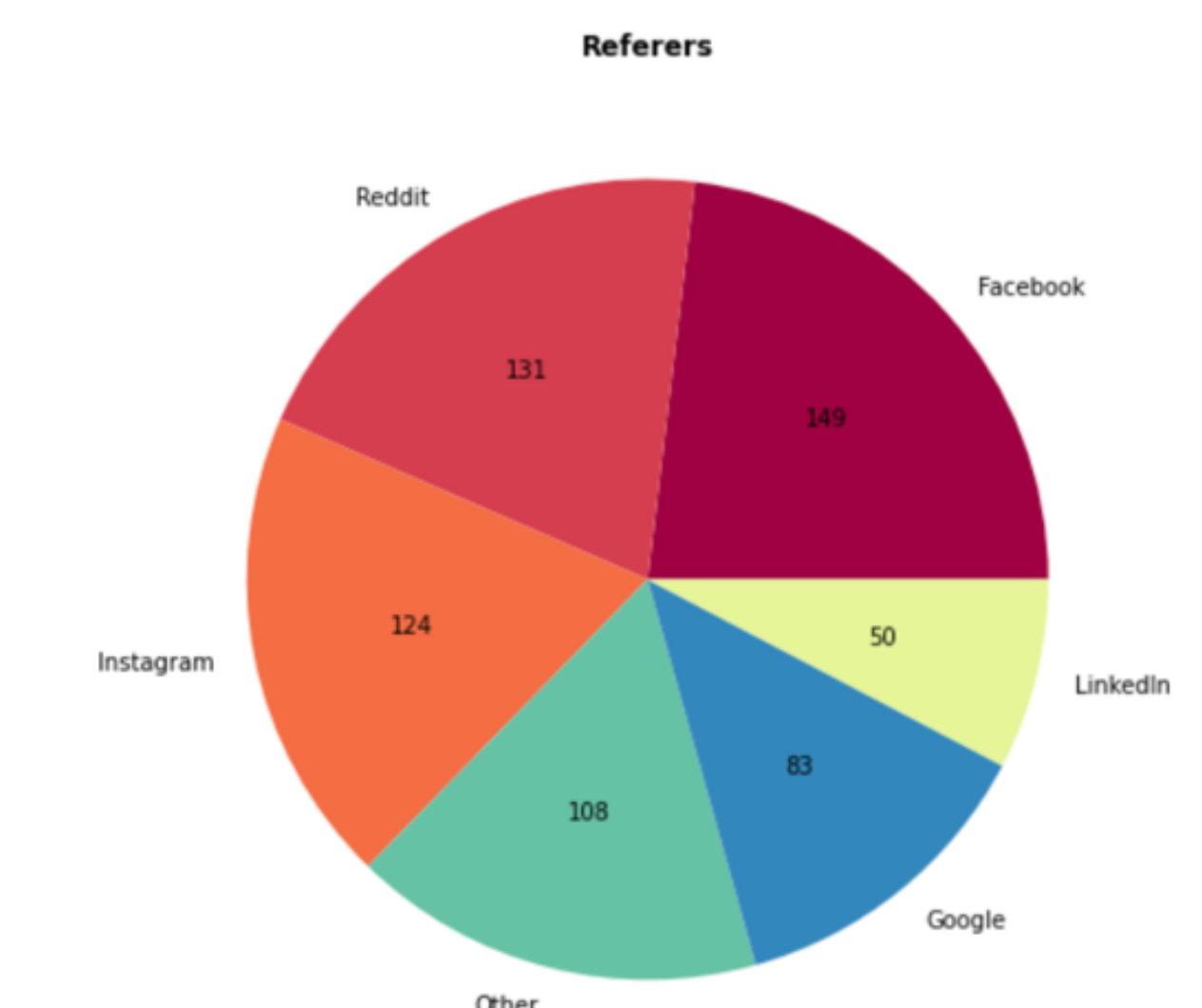

Figure 5: Site visits by HTTP Referer
70.5% of visitors came to the site from posts on Instagram, Facebook, LinkedIn, and Reddit, showcasing the power of social media advertising.

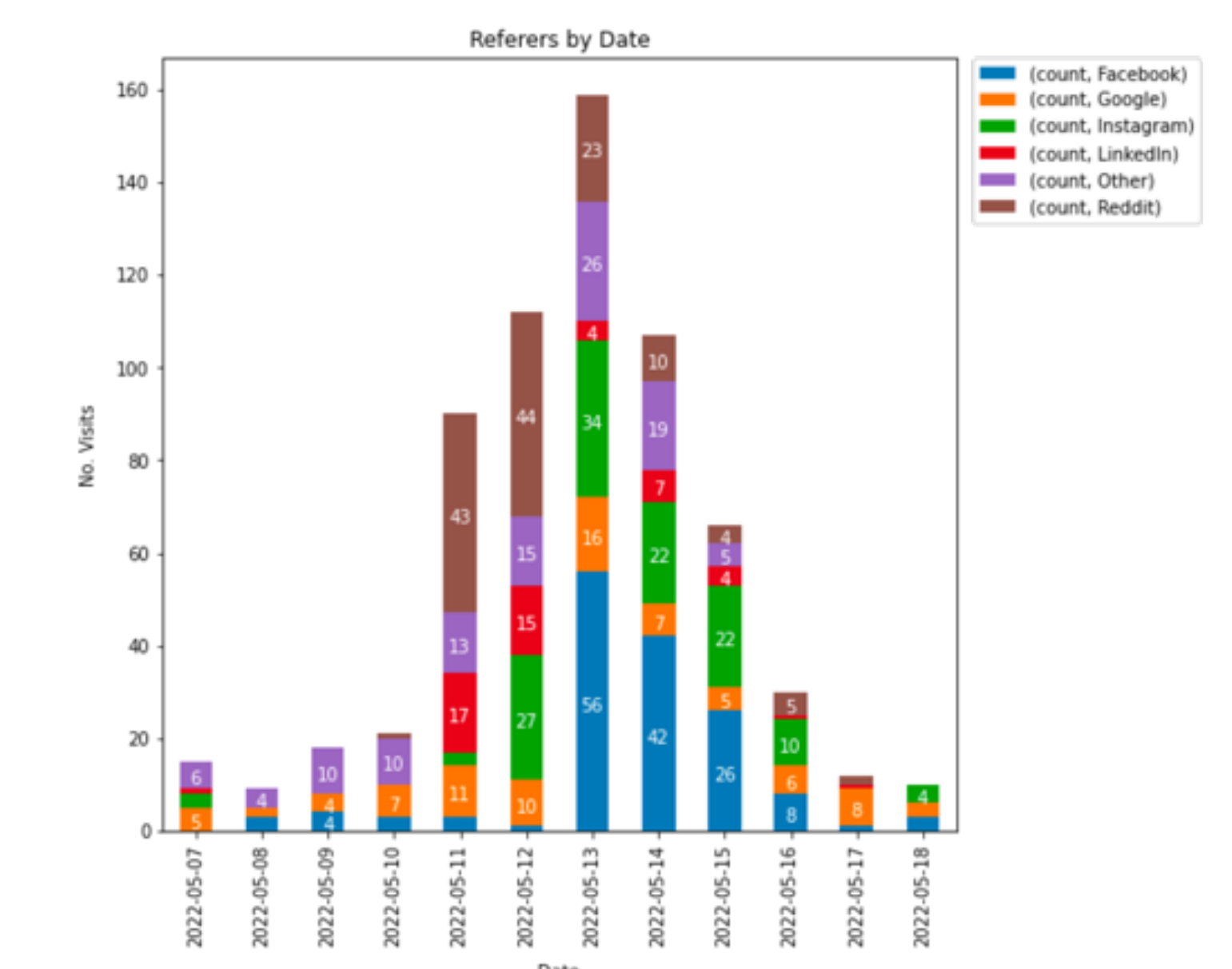Figure 6: Visits over time by HTTP Referer
Ryde Carpool partnered with two events, Shabang and Avila Resort, from May 13-15. There was a visible spike in site activity during that weekend, fueled by social media marketing on Facebook, Reddit, and other platforms.

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