Opportunity Hack: National Center for Missing and Exploited Children

Connor Segneri
Michael Ryan
Joshua Lee
Tommy Fowler

The Project Team

Connor Segneri

Connor Segneri is from Scottsdale, AZ and is currently a Senior at Grand Canyon University perusing a degree in Computer Science with an emphasis on Big Data Analytics. Connor is involved in many organizations at Grand Canyon University including the Honors college, the Innovative Computing Club, and several other organizations. Connor and his team recently participated in the 2017 PayPal Opportunity Hack where he and his team were able to build a custom Shiny web-based application in R. This application provides a UI that will allow the non-profit, National Center for Missing and Exploited Children, to filter, query, examine, and download information from their database.

"It was an amazing opportunity and it feels good to be able to apply my skills to a very real problem."

– Connor Segneri

Joshua Lee

Joshua (Josh) Lee has lived in Surprise, Arizona since June of 2009 and is currently an Honor's student studying Computer Science with an emphasis in Big Data Analytics at Grand Canyon University (GCU). Josh is currently the Marketing Officer of GCU's Innovative Computing Club (iC) and is involved in several other projects and organizations such as: The Project Management Fellowship, the Smart Urban Fabric (SMURF) and working on a mixed reality app for the Microsoft HoloLens. Josh recently participated in the 2017 PayPal Opportunity Hack where he and his team were able to build a custom Shiny web-based application in R. This application provides a UI that will allow the non-profit, National Center for Missing and Exploited Children, to filter, query, examine, and download information from their database.

"It was a fun and challenging experience. I had never worked with R or Rstudio before this and it was a great opportunity to learn it while I was able to apply it to a real world problem ." – Joshua (Josh) Lee

Thomas Fowler

Thomas (Tommy) Fowler is from Santa Rosa, CA and is currently an Honor's student studying Computer Science with an emphasis in Big Data Analytics at Grand Canyon University (GCU) Tommy's expected graduation date is April 2019. Tommy is currently the Vice President of GCU's Innovative Computing Club (iC). Tommy recently participated in the 2017 PayPal Opportunity Hack where he and his team were able to build a custom Shiny web-based application in R. This application provides a UI that will allow the non-profit, National Center for Missing and Exploited Children, to filter, query, examine, and download information from their database.

"It was a very fun and intuitive experience, and we were able to provide our non-profit representatives with a working solution that met all of their needs."

– Thomas (Tommy) Fowler

Michael Ryan

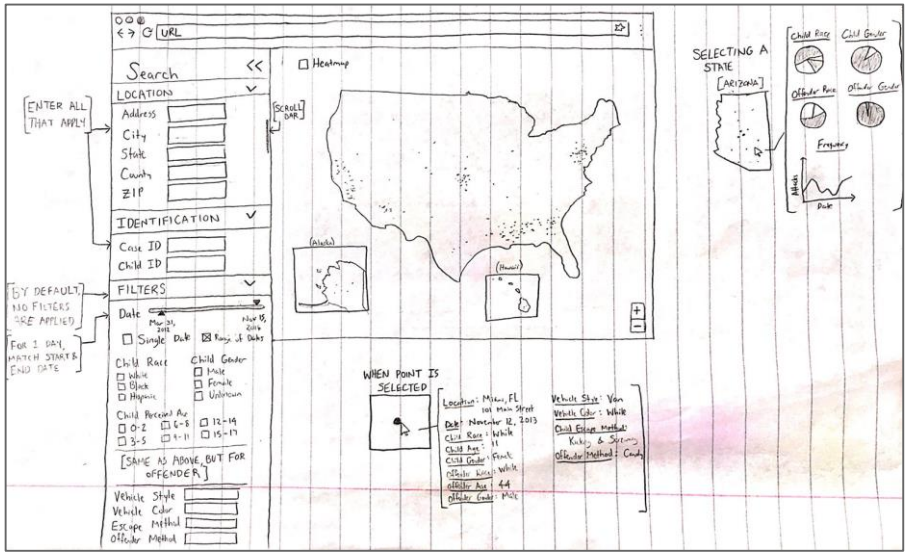
Michael Ryan is from Colorado Springs, CO and is currently perusing his degree in Information Technology with an emphasis in Cyber Security at Grand Canyon University (GCU). Michael is an active member of the Innovative Computing Club (iC) and enjoys spending his free time volunteering at his church and other organizations. Michael recently participated in the 2017 PayPal Opportunity Hack where he and his team were able to build a custom Shiny web-based application in R. This application provides a UI that will allow the non-profit, National Center for Missing and Exploited Children, to filter, query, examine, and download information from their database.

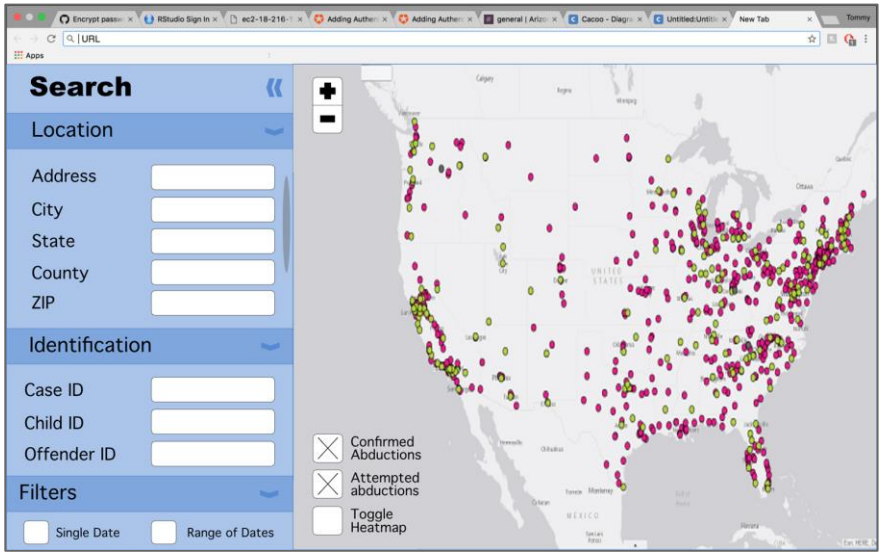
"This was an amazing opportunity to give back to the community. My team and I have never collaborated on a project before this and I am extremely impressed with our results!" – Michael Ryan

The Challenge

- The National Center for Missing and Exploited Children is the only non-profit agency to track abductions nationwide.
- They were looking for a way to quickly analyze their two datasets: missing children and confirmed attempted abductions.

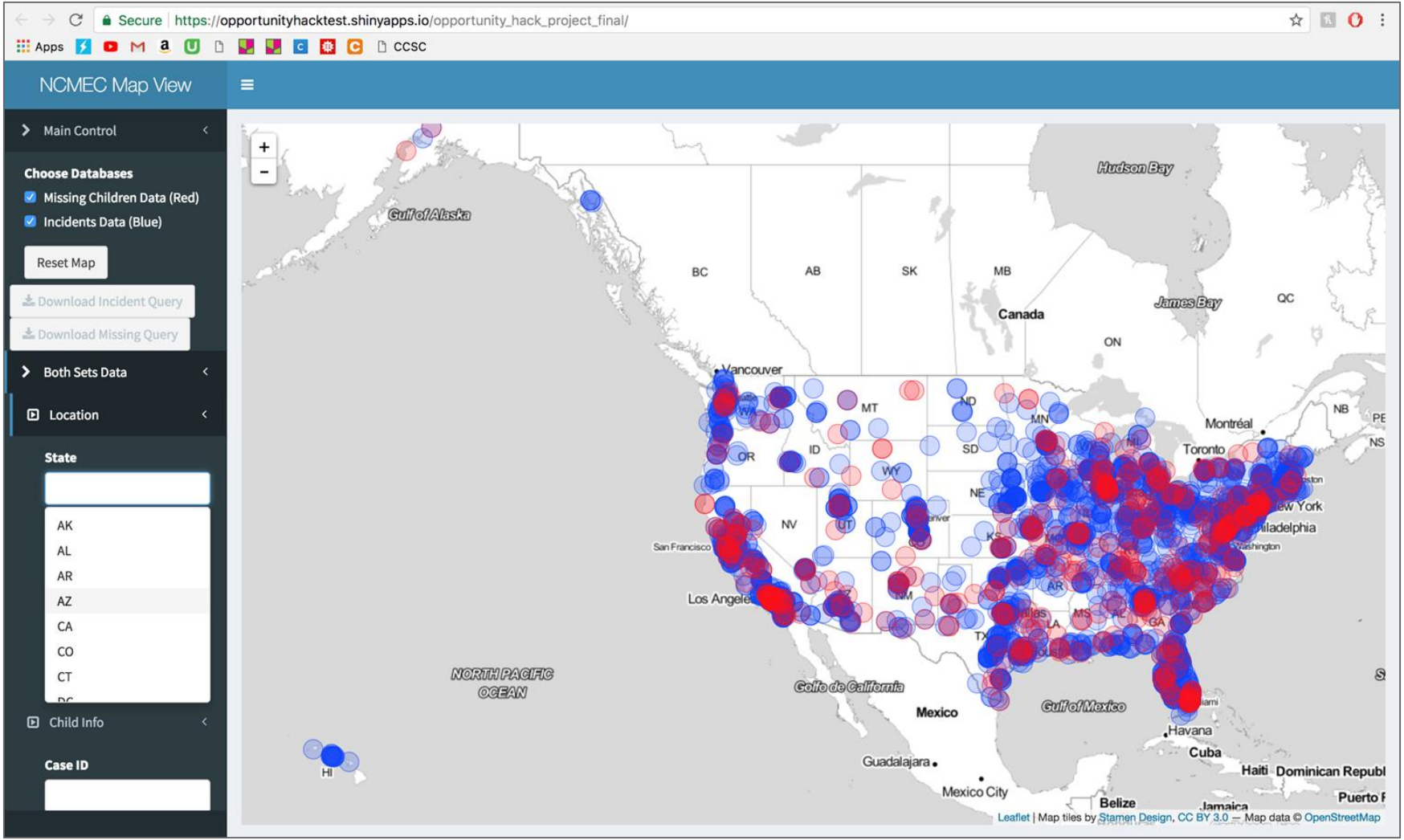
Initial Designs





Tools We Used

Final Product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Apps
CCSC
NCMEC Map View
Main Control
Choose Databases
Missing Children Data (Red)
Incidents Data (Blue)
Reset Map
Download Incident Query
Download Missing Query
Both Sets Data
Location
State
AK
AL
AR
AZ
CA
CO
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Child Info
Case ID
Hudson Bay
Gulf of Alaska
BC
AB
SK
MB
Canada
James Bay
QC
ON
Vancouver
MT
ND
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Montréal
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Golfo de California
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Mexico City
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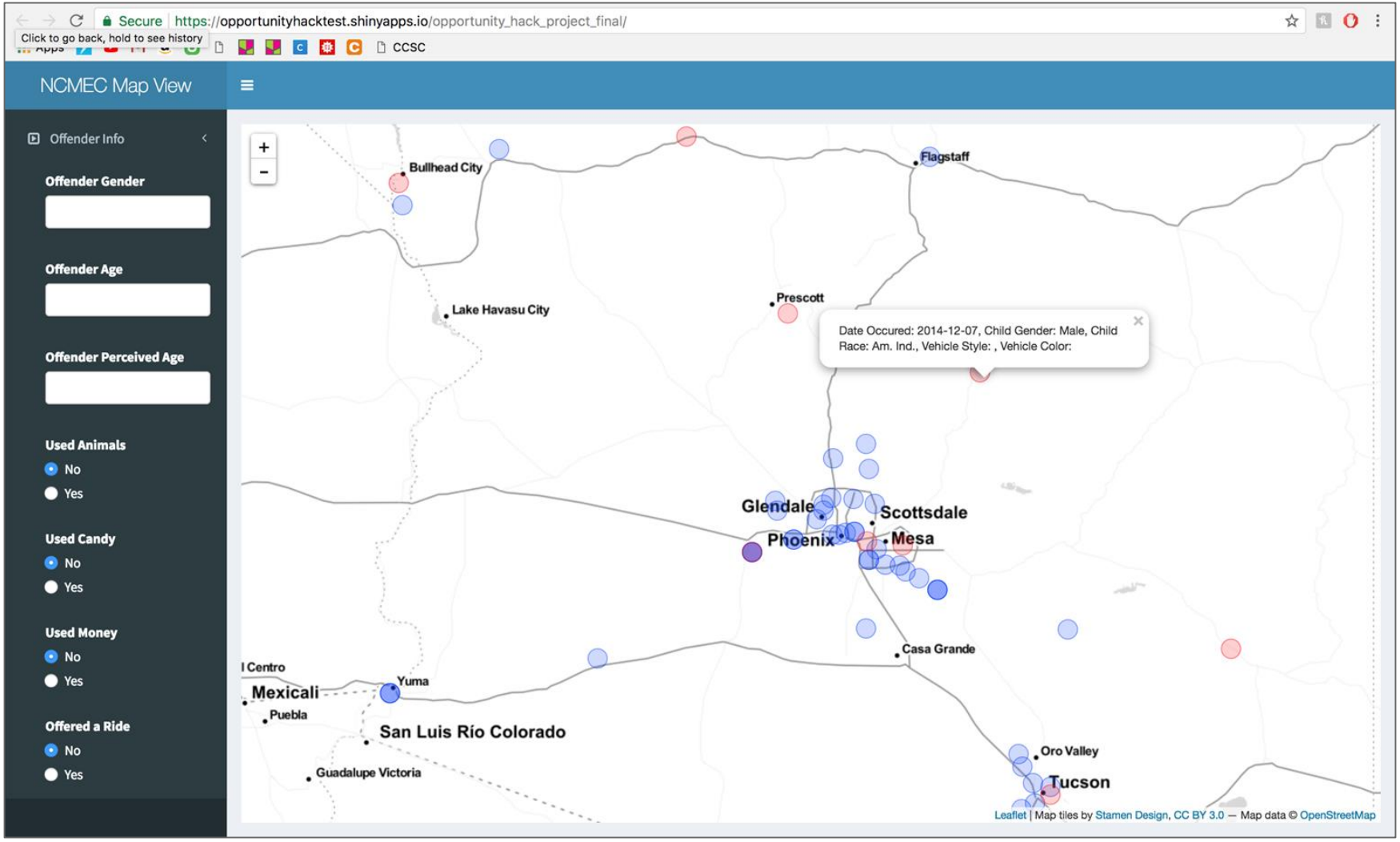
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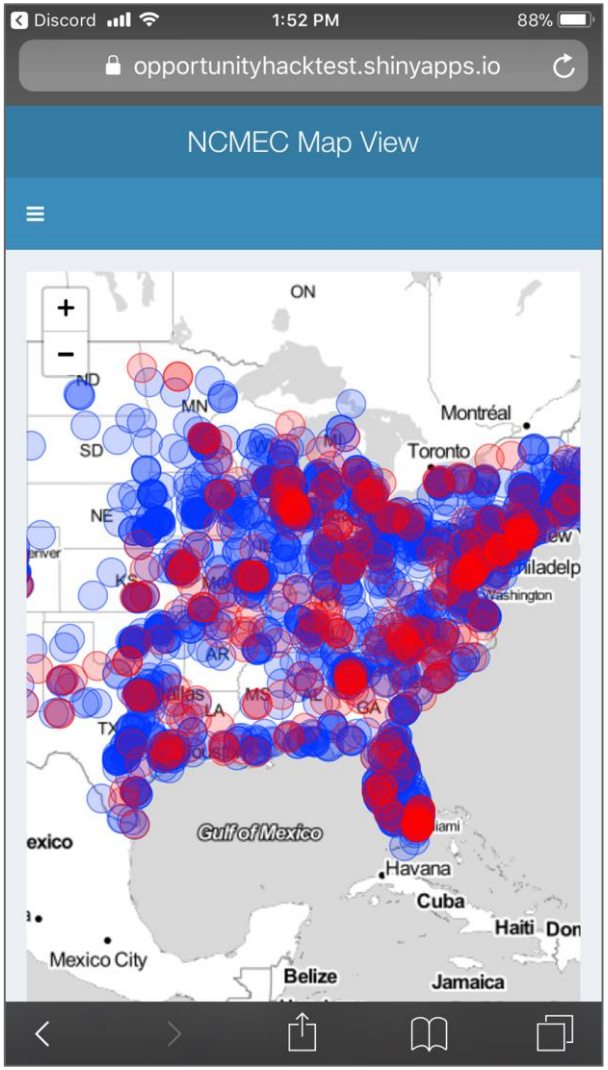
Click to go back, hold to see history
CCSC
NCMEC Map View
Offender Info
Offender Gender
Offender Age
Offender Perceived Age
Used Animals
No
Yes
Used Candy
No
Yes
Used Money
No
Yes
Offered a Ride
No
Yes
Bullhead City
Flagstaff
Lake Havasu City
Prescott
Date Occured: 2014-12-07, Child Gender: Male, Child Race: Am. Ind., Vehicle Style: , Vehicle Color:
Glendale
Scottsdale
Phoenix
Mesa
Casa Grande
Yuma
Mexicali
Puebla
San Luis Río Colorado
Guadalupe Victoria
Oro Valley
Tucson
Leaflet | Map tiles by Stamen Design, CC BY 3.0 — Map data © OpenStreetMap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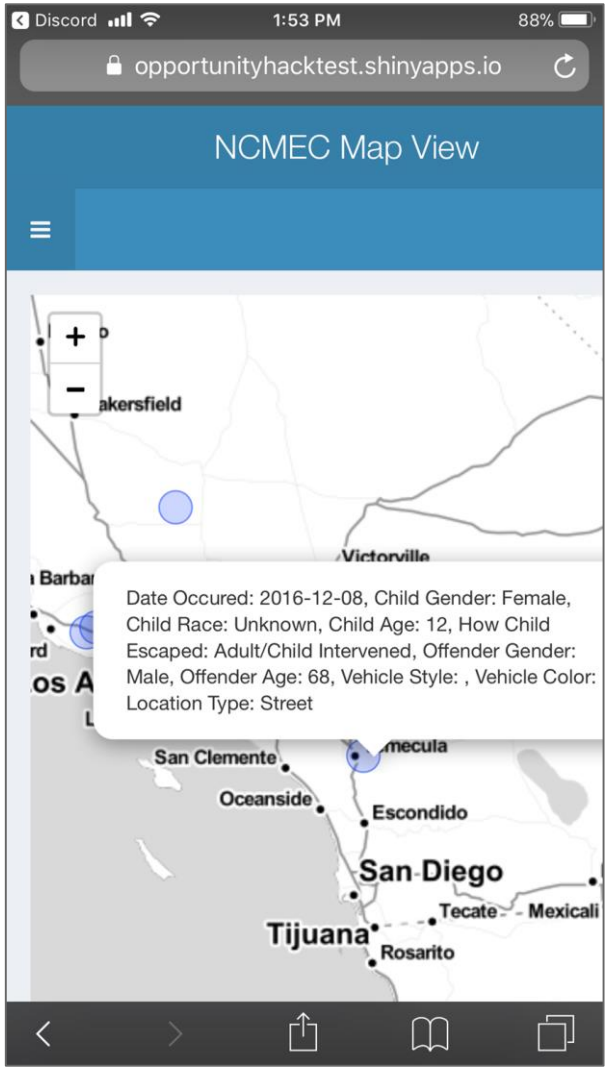
NCMEC Map View
ON
ND
MN
Montréal
SD
Toronto
NE
KS
AR
MS
LA
TX
GA
Gulf of Mexico
Havana
Cuba
Haiti
Mexico City
Belize
Jamaica


Discord
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NCMEC Map View
Victorville
Date Occured: 2016-12-08, Child Gender: Female, Child Race: Unknown, Child Age: 12, How Child Escaped: Adult/Child Intervened, Offender Gender: Male, Offender Age: 68, Vehicle Style: , Vehicle Color: Location Type: Street
San Clemente
Oceanside
Escondido
San Diego
Tecate
Mexicali
Tijuana
Rosarito

Thank you to all the sponsors and non-profits involved!