



# Events Management

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# Our Customer



- Virginia 4H Shooting Education Program
  - Headed by UVA retiree **Paul Benneche**
- Goal is to teach youth life skills through firearms safety and marksmanship competitions
- Several competitions throughout the year. The Virginia State Shoot is the largest one
- Mr. Benneche manually handles enrollment/organization of the State Shoot by himself... by hand, with Excel spreadsheets
- Our task was to automate this process

# More on the State Shoot Schedule



- Runs for two days- Saturday and Sunday. Participants can enter events on both days
- Scheduling hierarchy:
  - Event- broad category, such as BB Rifle, PPP Air Pistol, Archery, etc.
  - Relay- specific instance of an event, like a 1:00 pm Archery. They have a maximum number of competitors and a time limit
- Relays scheduled so all participants can compete in the events they want
- Concerns- spacing relays so participants can travel, accomodating special requests, leaving time for lunch...
- Part of our project was developing an automated scheduler to address these concerns and automate the process

# Technologies and Tools

- Django
  - Python
  - HTML
  - CSS
  - JavaScript
- C (scheduler)
- Bootstrap
- Travis CI
- Github



# Requirements



- Two types of users: Coaches and Admins
- Coaches:
  - Create, edit and delete player profiles belonging to their own counties
  - Generate a report with information about those players' schedules
- Admins:
  - Create, edit delete coach accounts, other admin accounts, players, events, relays, competitions, and any other element in the system.
  - Trigger scheduling program, edit schedule after program runs
  - Generate reports about all elements in the system
  - Not restricted to one county- can modify all elements in the system

# Changes to Requirements



- The names of some system elements were changed, which meant changes to the UI (players -> athletes, heats -> relays)
- We transitioned from supporting one competition at a time, to supporting multiple competitions simultaneously:
  - This meant that some elements (athletes, coaches) had to be shared across competitions, while some elements (events, relays) were unique to each competition.
- We created a new report in CSV format, to allow the administrator to continue using Excel for tasks not performed in the system.



# Challenges

- Travis CI issues
- Merge conflicts
- Dealing with requirements changes
- Creating the scheduler
- Deploying the site

## Strengths



- Efficient scheduling algorithm
- Allows the admin enough flexibility and control
- Sharing the schedule and other information is straightforward

## Weaknesses

- UI could be more streamlined
- Competition duration is fixed at 2 days
- Admin cannot “lock” competitions to keep coaches from making changes



# Future Work



- Revamp the UI design
- Make competitions more flexible
- Allow admin to “lock” competitions, so coaches cannot make any more changes
- Allow coaches to create their own accounts with admin approval
- Tie our system into the competition scoring system currently in use

# Demo

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# Attendance Link

<http://bit.ly/2FYVk8M>

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