



# *Politics of Expertise: Who does what work of computer vision?*

*Suzanne L. Thomas, PhD  
Intel Labs*

*September 2016*



Suzanne

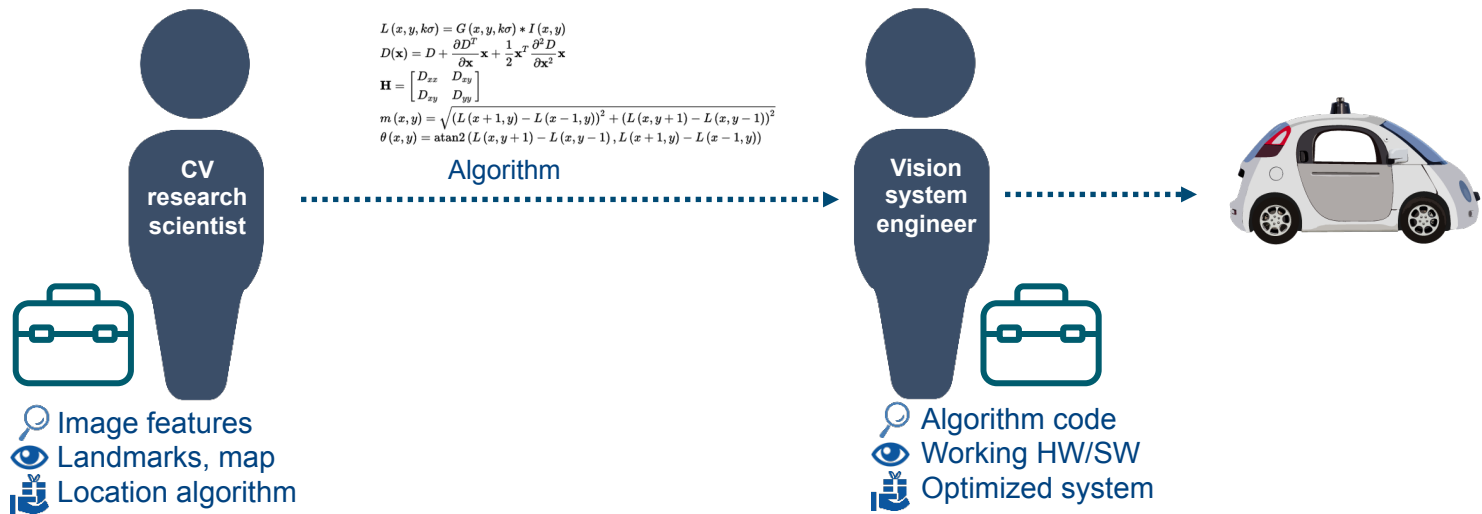
Anthropologist at Intel Labs

Research: who does what computer vision work, how and why?

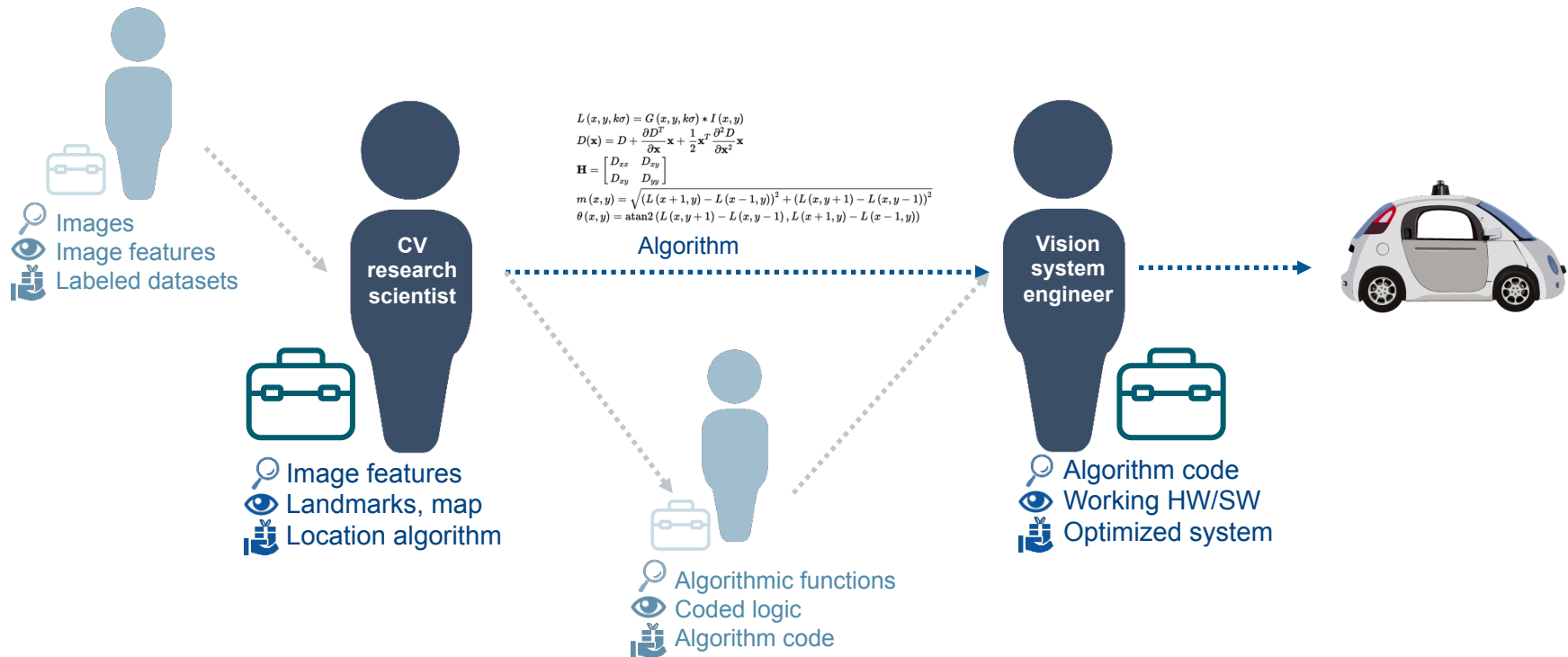
Participants: 30+ computer vision professionals at 6 companies in North America

- 🔍 What do they look at?
- 👁️ What are they trained to see?
- 👤 What do they share with others?

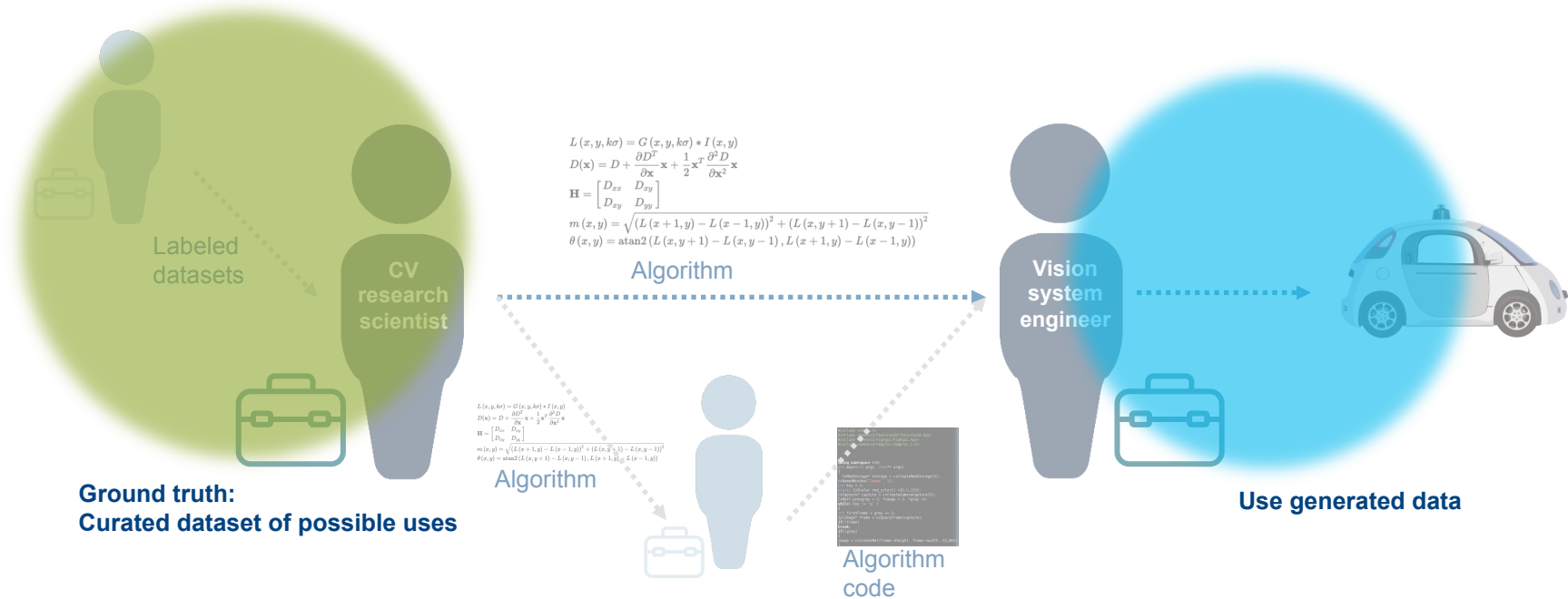
# Vision + System Experts



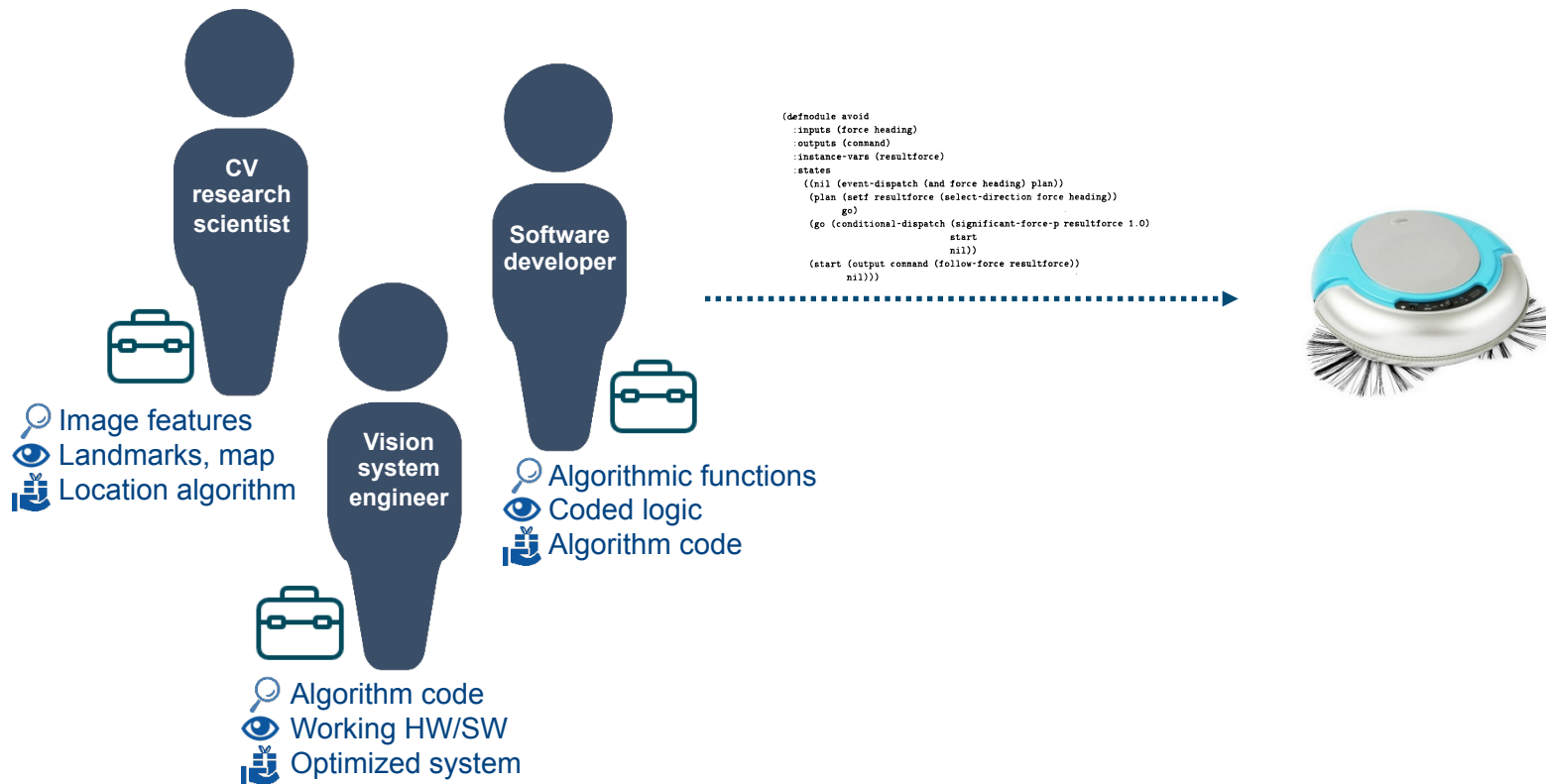
# Vision + System Experts



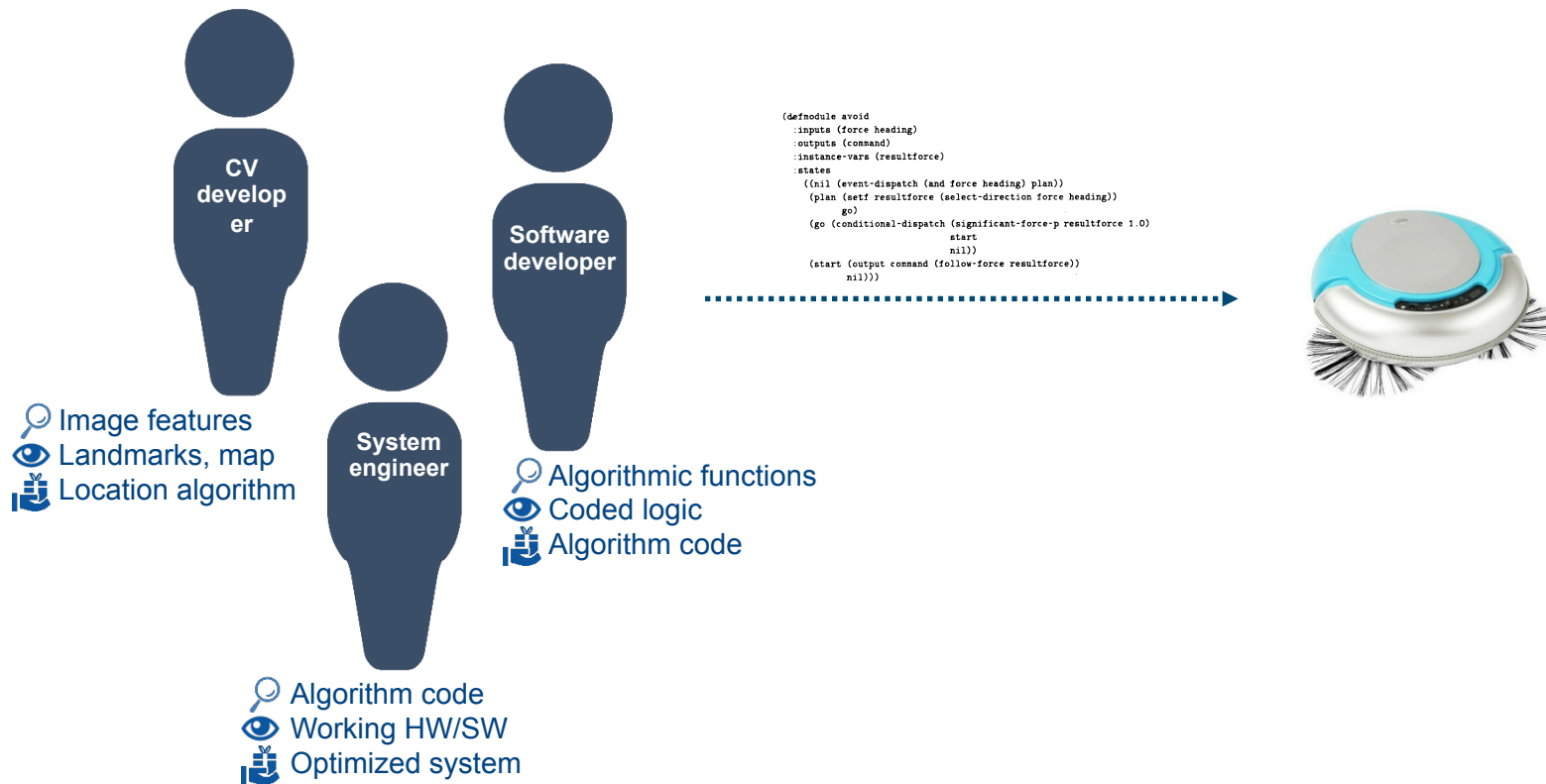
# Vision + System Experts



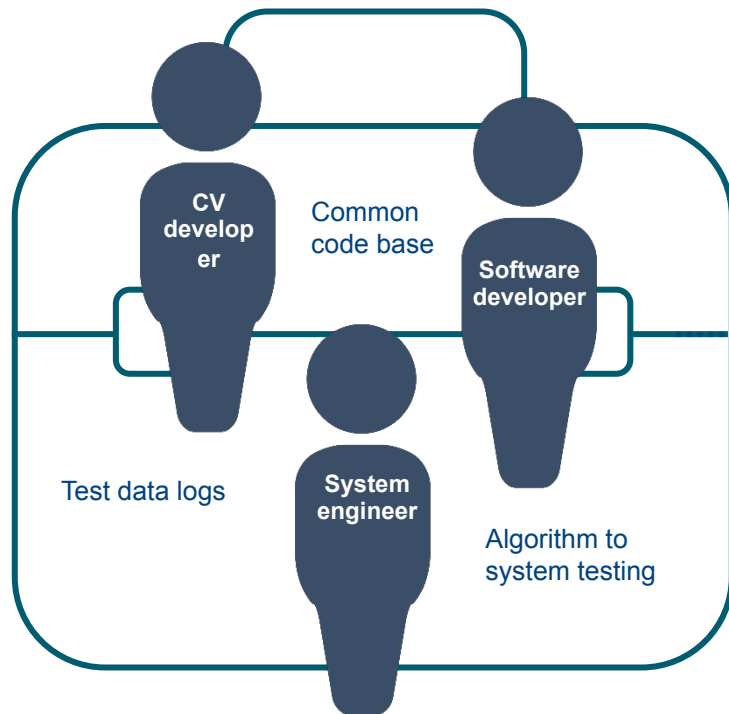
# Vision Product Development Team



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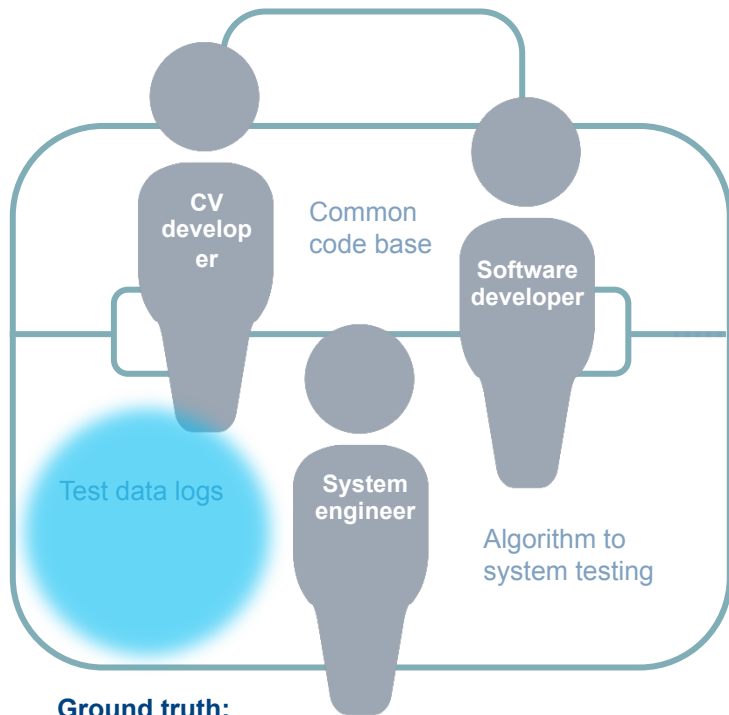
```
(defmodule avoid
  :inputs (force heading)
  :outputs (command)
  :instance-vars (resultforce)
  :states
  ((nil (event-dispatch (and force heading) plan))
   (plan (setf resultforce (select-direction force heading))
         go)
   (go (conditional-dispatch (significant-force-p resultforce 1.0)
                             start
                             nil))
   (start (output command (follow-force resultforce))
          nil)))
```



-  Logical functions
-  "Good enough" code
-  Optimized system



# Vision Product Development Team

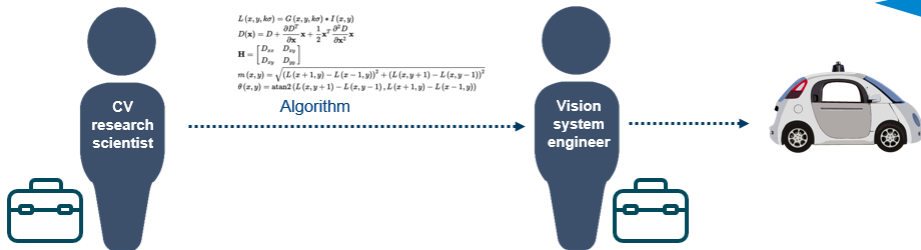


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```

**Ground truth:  
test use data**

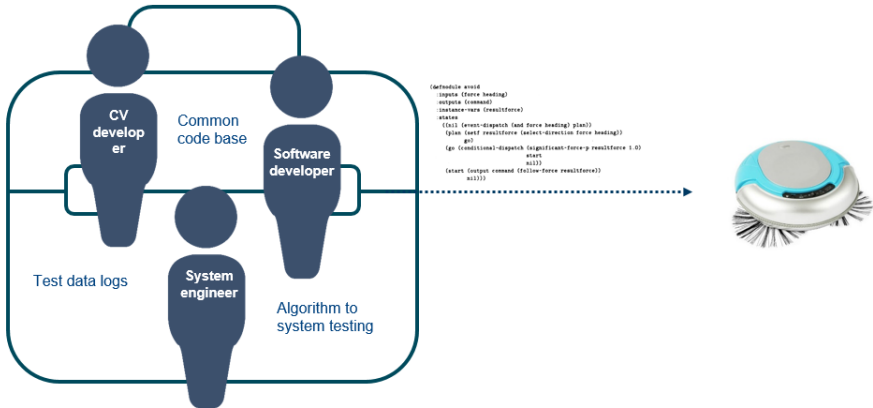
**Use generated data**

# Who does what work of computer vision?

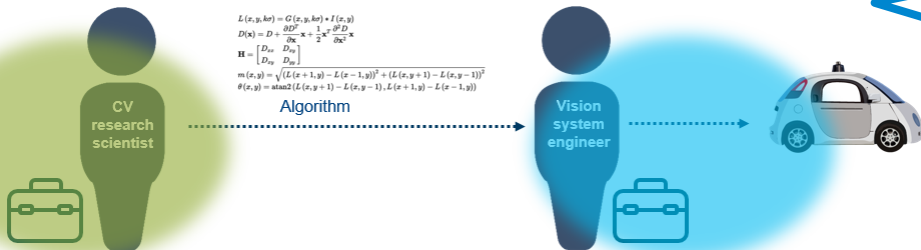


“What they do is not computer vision, it is system engineering”

“We don't hire prima donnas”

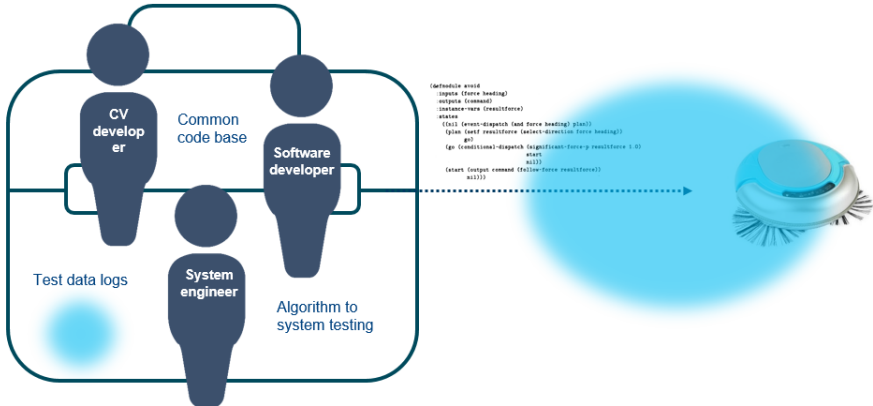



# Start the conversation with their concerns about data...



“Everyone dreams of the perfect ground truth data set, but it’s not possible”

“We can’t possibly test our robot in 2 million homes, so we use common sense”



A group of ten people, five men and five women, are standing in a hallway. They are dressed in casual business attire. In the background, there is a black poster with a white skull and crossbones. The text is overlaid on the image.

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September 2016