



mockup review

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section a

# Terrainer

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*put a hill under your tires*

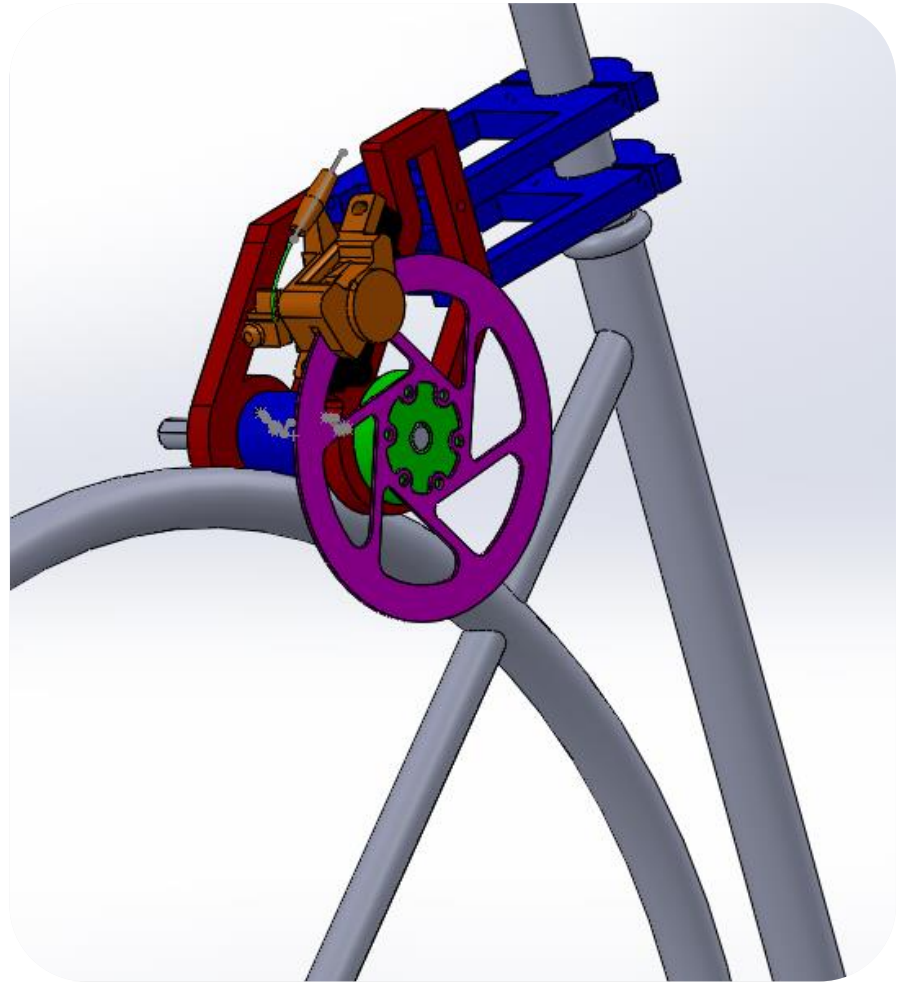
**Presenter** Samantha Darryanto

# Terrainer | product vision

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**simulates  
personalized racing  
courses**

**allows for outdoor  
riding**



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section a

sketch

mockup

risks

next steps

# Terrainer | sketch model

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No substantial  
weight

No disruption  
to rider's  
movements



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# Terrainer | sketch model

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Magnetic damper  
ineffective at higher  
velocities

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# Terrainer | mockup model

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# Terrainer | risk one

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*How effective are calipers in applying resistance?*

**Input force**



**Braking force**



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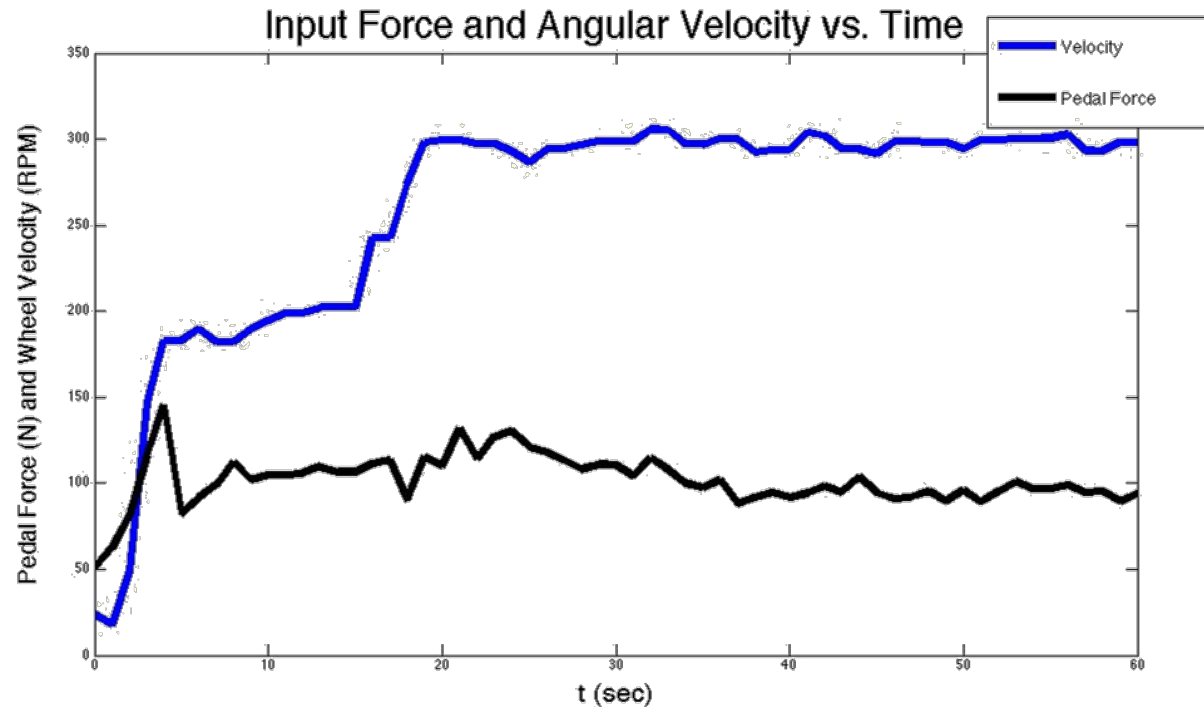
**risks**

next steps

# Terrainer | risk one

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*How effective are calipers in applying resistance?*



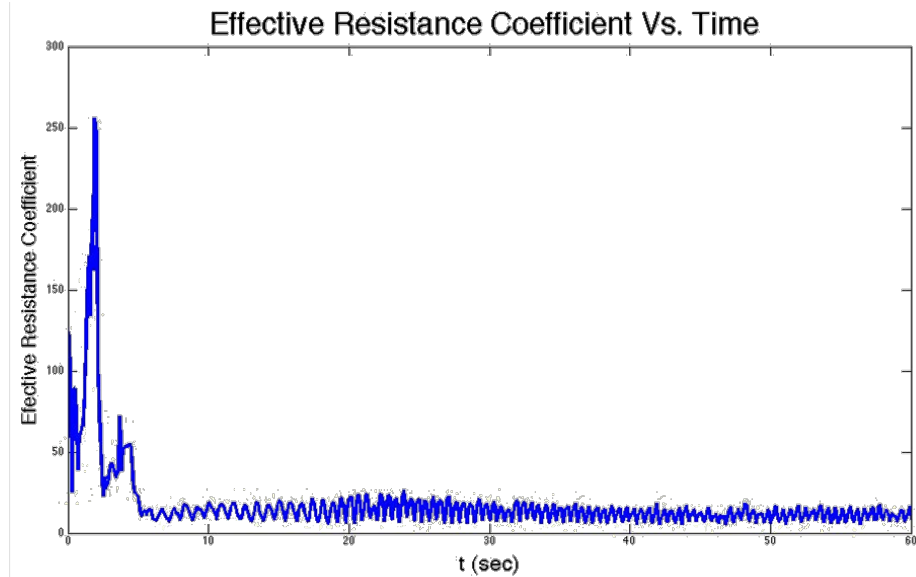
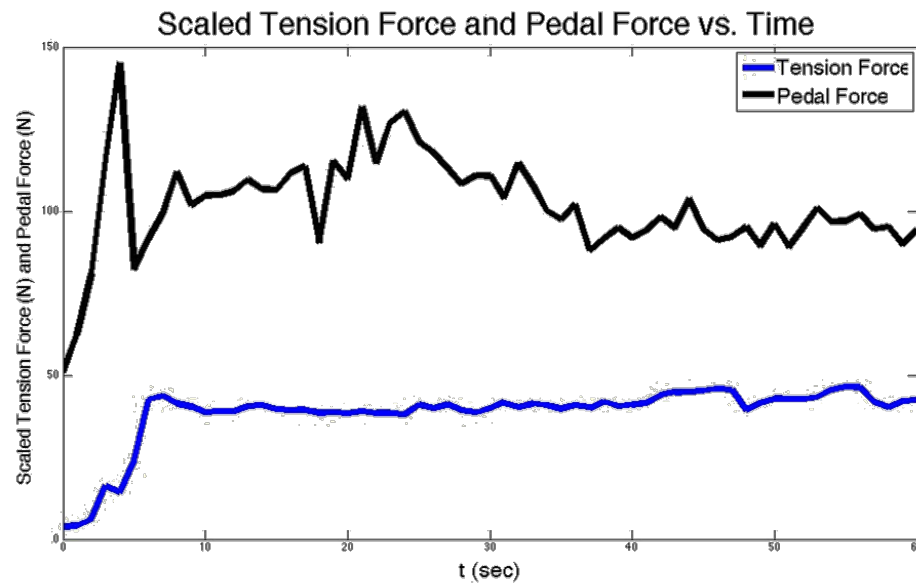
**force independent of velocity**



# Terrainer | risk one

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*How effective are calipers in applying resistance?*



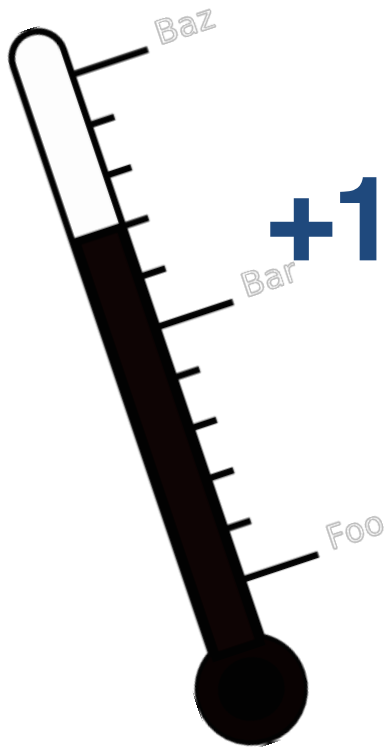
**force directly correlates with tension**

# Terrainer | risk two

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*Will there be excessive heat generation by friction?*

**Some heat generation**



**+10 degrees**

**1 minute**



# Terrainer | risk three

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*Does Terrainer actually simulate uphill riding?*

user testing of **15** participants



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section a

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**risks**

next steps

*Does Terrainer actually simulate uphill riding?*

**93%** of users  
said experiences were  
**comparable**

# Terrainer | product contract

Customer Needs	Product Attributes	Engineering Specifications
Lightweight	Lightweight	< 5 lb
Is easily removed from the bike frame	Quick mount	< 60 seconds
Doesn't damage bike	Low wear on bike	No wear on rims, wheels, or frame after 10hrs of riding
Visual cues for inclined angles	Display/ GUI	Provides user with feedback on hill gradient & length
Accurately simulates hill riding	Realistic power dissipation	Match real hill riding power input within 5%
Access to performance statistics	Riding statistics available to user	Provide user with riding power & velocity data

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## **visual cues** **wear & tear**

# Terrainer | pricing & target consumers

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Target price of  
**\$250**

35.6M cyclists in the United States  
18.8M for fitness, **5M** for racing/ sport

# Terrainer

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Put a hill under your tires

