BearLift

Proposal & Implementation Plan

Paxtan Laker Austin Davis Brandon Yu

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"Andrew Jackson, in the main foyer of his White House, had a big block of cheese. Jackson wanted the White House to belong to the people, so from time to time, he opened his doors to those who wished an audience. I know the more jaded among you see this as something rather beneath you. But I assure you that listening to the voices of passionate Americans is beneath no one, and surely not the peoples' servants."

-Leo McGarry, White House Chief of Staff

The West Wing

Meet the Team





Paxtan Laker

Major: EECS

• Year: Sophomore

Hometown: Murrieta, CA

Involvement: Fung Institute, ISAACS, STAC

• Interests: Board Games, Debate, Survivor

Meet the Team





Austin Davis

Major: EECS

Year: Sophomore

Hometown: Murrieta, CA

Involvement: MDB, VR@B

• Interests: Travelling, Video Games, Podcasts

Meet the Team





Brandon Yu

Major: Business & Linguistics

• Year: Sophomore

Hometown: Santa Clarita, CA

Involvement: BBS, UFA|UMCG

• Interests: Politics, World History, Swimming

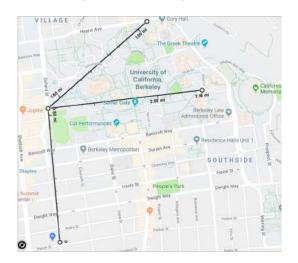
Background





Our Status Quo

Living off-campus:



- Other transport:
 - Bikes, bus, scooter

Ski Lift Idea & Proposal

Reddit AMA:



Reception & Response



Presentation to Chancellor Christ @ Office Hours

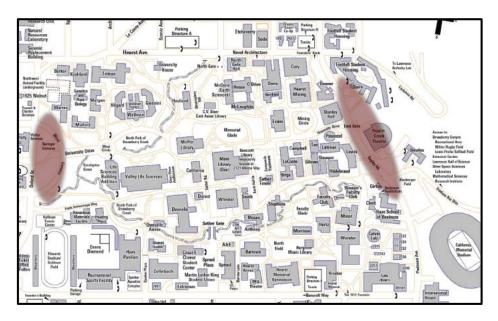
What is Bearlift?



Our idea for a cross-campus ski lift - Basics



- Quad-seater detachable chairlift
- Covered gondolas at some frequency
- Board from ground level



- Transport up the campus hill
- Could have 1+ stops along the way
- Can ride in both directions

Chair Lift Details

- Require poles at some frequency
- Capable of turning
- Flexible distance from ground

Mobility Benefits



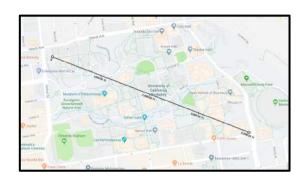
Speed

Bearlift is faster than current options

Status Quo

- West to East travel:
 - Walking 15 min
 - Biking Near impossible
- Hard to make Berkeley Time
 - Lost productivity

Bearlift







4,000 ft (max)

1,000 ft/min

4 min

Consistency



Bearlift has higher, more regular capacity than buses

Status Quo

- Bus Capacity:
- 1 bus every ~20 min
 - 1 bus = \sim 30 passengers
- 100 passengers/hr/bus
- Unpredictable schedule reduces ridership

Bearlift



1 chair / 10 seconds

X

4 passengers / chair

=

24 passengers / minute...

1,440 passengers / hour

No wait time, perfectly predictable

Gain back instructor & student productivity

Accessibility



Bearlift services more people, helping everyone

Status Quo

- Hills are a challenge for those with limited mobility
- Current resources are scarce, and cause disruption

Bearlift



- 1 in 10 (or so) chairs could be replaced with ADAfriendly gondolas
 - Cost is the limiting factor
- Judgment-free, seamless accessibility to everyone from ground level

Cultural Benefits



Freshman Integration



Foothill & Stern residents would be better connected to campus

- Foothill & Stern residents currently feel underserved and isolated
- A negative experience freshman year can have rippling effects
- Bearlift would physically integrate these communities



Perception



Bearlift would crucially improve UCB's reputation among 3 groups



Potential Applicants



Students



Alumni Donors

- Perceived uniqueness & campus appeal
- On-brand with Berkeley innovative spirit
- Improve applicant number & yield rate

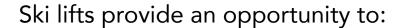
- Point of pride and/or memes (both good)
- Campus unity around a highly visible structure
- Increase campus morale

- Tangible project would give alumni something to feel proud about giving to
- Shift conversation from controversial political headlines

Dialogue

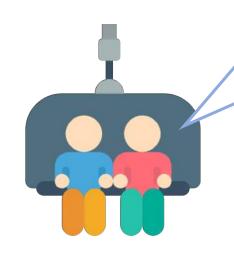


Ski lifts provide opportunity for meeting new people



- Strike up a **zero-commitment** conversation
- Meet people you would otherwise never interact with
- Enjoy the ride in silence

In a **low-friction** social environment with very little downside (rides are <4 minutes)



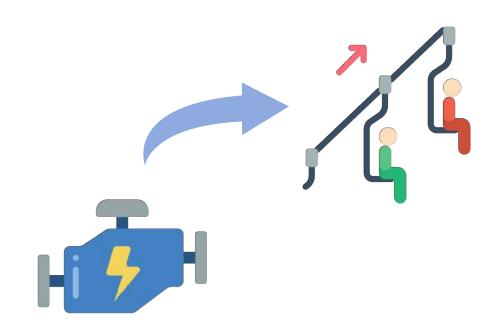
Social Good



Environmental Benefits



Bearlift could be greener than buses



Operating 12 hr/day Approx. **100kWh – 200kWh**

- Use diesel fuel to run simple motor
- Predictable usage very little fluctuation
- Top drive vs. Bottom drive
 - Bottom is easier to install, top is more efficient

Housing Inequality

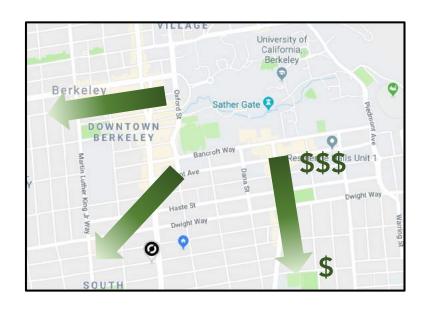


Bearlift could address housing & safety difficulties



Berkeley is undoubtedly in a housing crisis -

2018 study (Wallethub) showed Berkeley, CA as having the **least affordable** housing market of the 202 cities surveyed (as a % of median income)

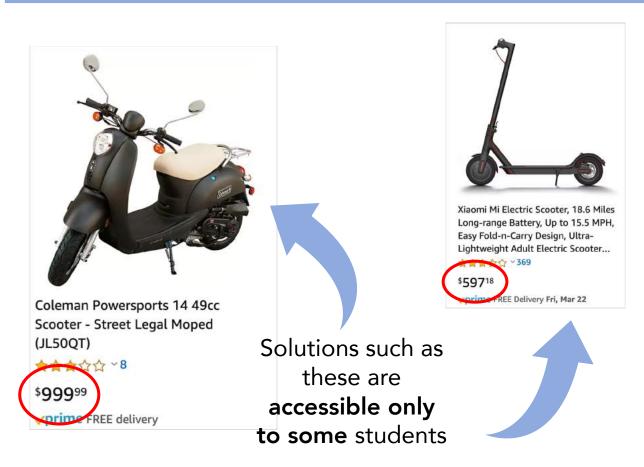


- Expanding range of viable student homes would spread out demand & lower prices
- Student safety while walking home

Economic Inequality



Current transportation creates difficulties for students in cheaper housing



- Students without the means to get to/around campus quickly are stuck with the burden of commute time
 - Academic disadvantage
 - A 30 commute each way adds up to 3.5 hours a week
- Cheaper housing means farther
- Bearlift would help democratize access to campus, and provide flexibility

Implementation



Costs



Directional estimates for financial impact

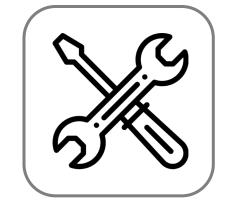
All costs are estimated and have a wide margin of error, industry data is secretive

Installation



\$5-10M

Maintenance



~\$200K/yr

Energy



~\$80K/yr

Potential Revenue Source?



Safety bar advertising space

Risks & Mitigations



Some potential difficulties can be minimized

Risk

General Liability – Immature riders may want to throw things off the lift

Mitigation

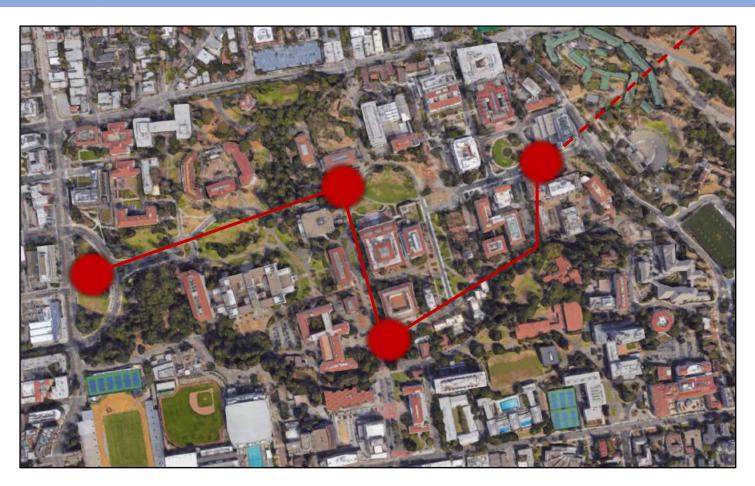
Reduce Height – Gets rid of anonymity that the lift provides

Bad Weather – Rain could result in lower ridership

Coverings – Plastic hoods on the seats can provide shelter

Route

Potential path the line could follow



Considerations:

- High flow locations:
 - Moffitt Library
 - Sproul/Dwinelle Plaza
- Blocking Campanile Way
 - Other protected views
- Avoiding obstacles
- Elevation differences
- Most students live Southside
- Each stop adds time & cost
- (Optional) Continue to LBL

Thank You!

Q&A

What's Next?



Appendix



Questions we have & topics to discuss

- Current costs for Bear Transit
 - Energy usage, insurance, etc.
- Potential roadblocks
 - Zoning, protected views, safety, funding
- More ski lift details
 - Upkeep cost: Utilities, maintenance
- Data about how students move to and around campus
 - Optimize stop locations

Case Studies





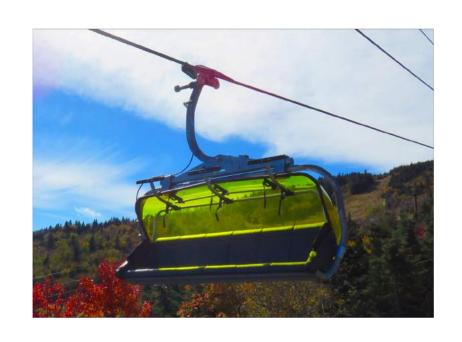
Portland Aerial Tram
Connects OHSU to downtown Portland
Praised for its aesthetic architectural impact



MetroCable, Medellin
Integrates commuter barrios with business core
Inspired cable car projects across LatAm

Ski Lift Components









Sources



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