



# Augmented Reality Instruction for the Machine Shop

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## Purpose

- Addressing: **the manufacturing skills gap** in the US
- "...an estimated **2.4 million** positions unfilled between 2018 and 2028, ... potential economic impact of **\$2.5 trillion.**" ("2018 Skills Gap in Manufacturing Study")
- Bottleneck of hands-on skills training is the trainer

## Progress

- App piloted in Mechanical Engineering undergraduate class at MIT: **2.670 Mechanical Engineering Tools**
  - two cohorts: one with the AR app, one without
- Vuforia View on iPad only
- State of App:
  - AR models of the parts at each stage of **milling, turning, and assembly**
  - Written instructions
  - Section view and model view

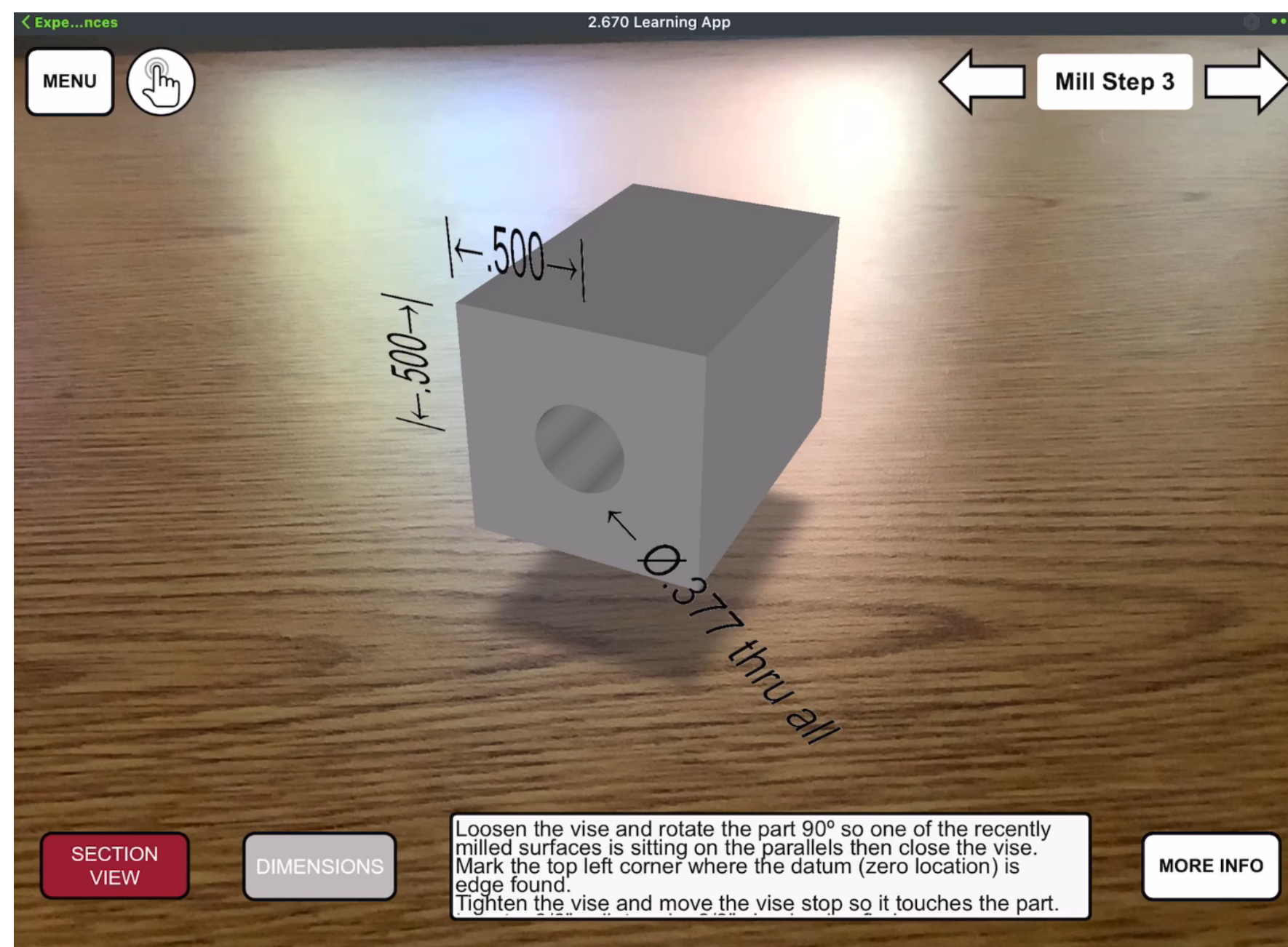
## Future

- **Machine shop** in the dorm room
  - Machine safety
- Less dependence on written instructions
- Improved **tool animations**
- Version for **smart phone** screens
- Eventually transition to **Hololens**
- Implement FAQ

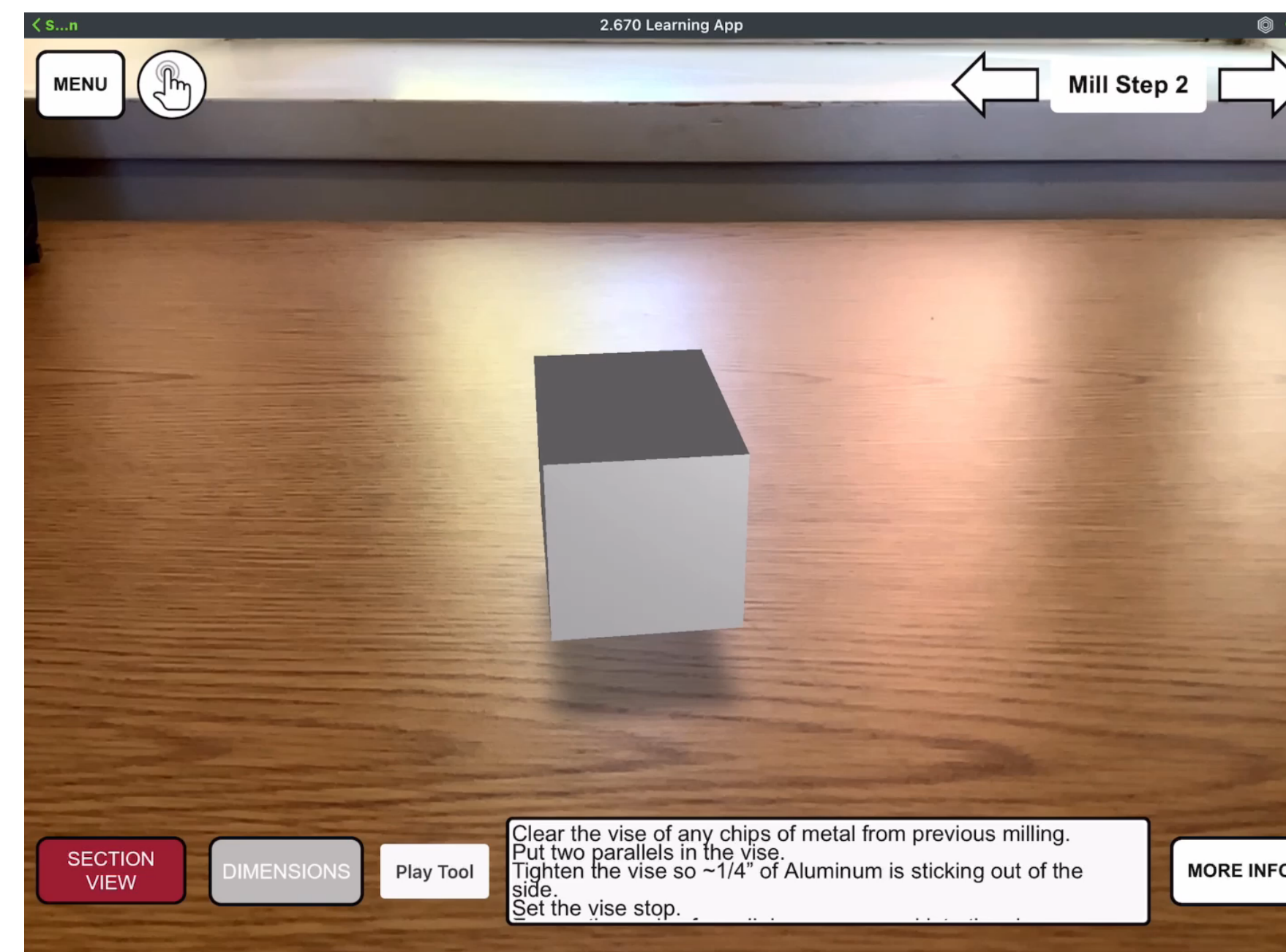
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## Milling, Turning, Assembly



## Animations



## Future: Machine Shop in the Dorm Room

