

Insurance Landscape













Coverage Cap

• Standard policies often cap coverage for high-value items like jewelry at around \$1,500.

Coverage Options:

- Scheduled Personal Property: Allows for specific items to be insured separately, often requiring appraisals
- Blanket Coverage: Provides a higher overall limit without itemizing individual possessions

Premium Range:

 Range from 0.7% to 2% of the item's value annually. For instance, insuring a \$10,000 item could cost between \$70 and \$200 per year.

Claims process

- Replacement value paid the goods fmv price
- Agreed (cash) value set during appraisal

Value Proposition: Customer Benefits



- Lower, Fairer Premiums
 Only pay for coverage when valuables are unlocked or in use
- Total Peace of Mind
 Instant push/SMS alerts on motion,
 tampering, or unauthorized unlocks
- Transparent Coverage
 Live dashboard shows current rate
 and cumulative spend
- Seamless Claims
 One-click export of timestamped event logs and sensor snapshots

Value Proposition: Insurer and Partner Advantages



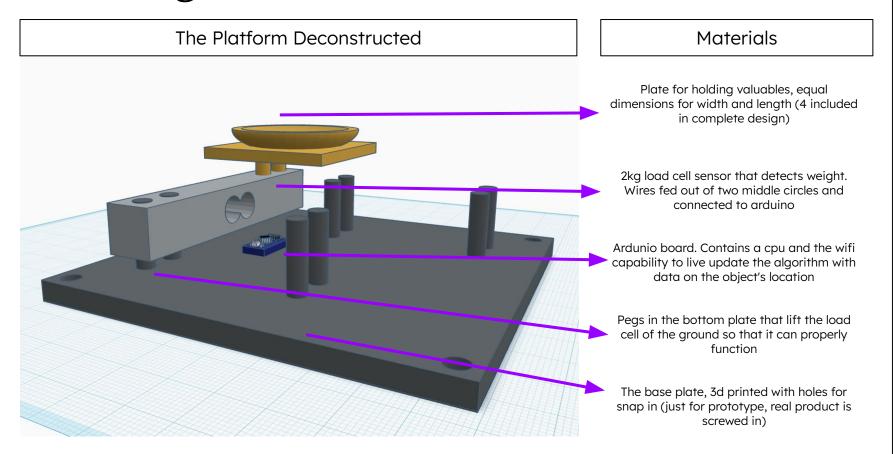
- Real-Time Risk Insights
 Timestamped lock/unlock + motion data for precise underwriting
- Fraud Prevention
 Tamper detection flags suspicious activity before claims
- Operational Efficiency
 Automated data feeds reduce
 manual investigations and
 paperwork
- Competitive Differentiation
 Offer a usage-based product that attracts tech-savvy, cost-conscious customers

The prototype

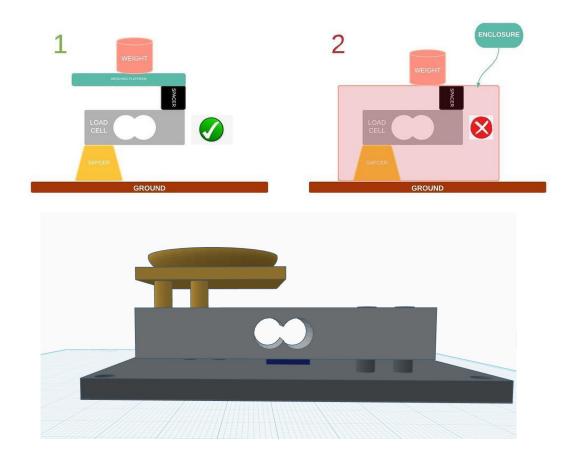




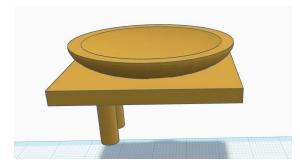
Zooming into the Platform...



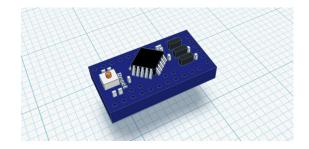
The load cell



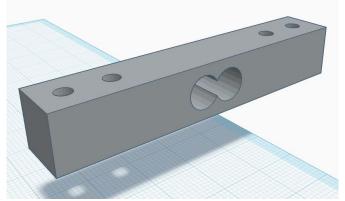
Materials needed



Holding Plate (x4)



Arduino Mini (x2)



Load Cell (x4)





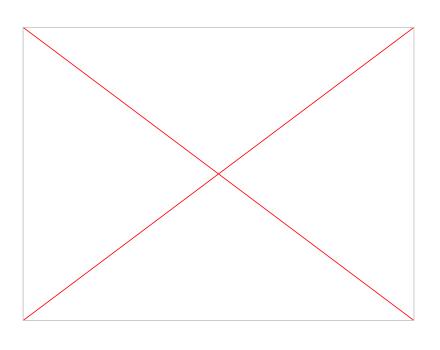


Bottom (**x1**), Side (**x4**), Front Plate (**x1**)

Assembly

- Insert load cells into bottom plate using snap on nubs
- Glue arduino mini(s) to the bottom plate in between the load cells
- . Connect arduino mini to wifi and download algorithm onto it
- 4. Attach holding plates into the top of each load cell
- 5. Attach side plates, going in clockwise direction
- 6. Attach front plate and secure doorhinge with lock
- 7. Attach the top plate using snap on nubs

Insurance Premium-Online Calculator



Variables Adjusted for:

- Appraised Value (\$) and Age of Appraisal
- Wear Frequency:
- Location Risk Score
- Territory (Home / Worldwide)
- Deductible and Policy Type
- Credit Score
- Claims Past 5 Years
- Hours Out of Safe

Insurance Premium- Amount Due Example

```
from datetime import datetime, timedelta
class SafeInsuranceAdjuster:
    def init (self, base annual rate pct: float, surcharge pct per minute: float):
        self.base_rate = base_annual_rate_pct
        self.surcharge = surcharge pct per minute
        self.total minutes out = 0.0
        self.open time = None
    def door open(self, now: datetime):
       if self.open time is None:
            self.open time = now
    def door close(self, now: datetime):
       if self.open time is not None:
            delta = now - self.open time
            self.total_minutes_out += delta.total_seconds() / 60
            self.open time = None
    def adjusted annual rate(self) -> float:
        return self.base_rate + self.surcharge * self.total_minutes_out
    def monthly premium(self, appraised value: float) -> float:
        annual_pct = self.adjusted_annual_rate() / 100
        return (appraised value * annual pct) / 12
if name == " main ":
    safe = SafeInsuranceAdjuster(base annual rate pct=2.4,
                                surcharge pct per minute=0.0001)
    start time = datetime(2025, 4, 28, 9, 0)
    for in range(20):
        safe.door open(start time)
        safe.door close(start time + timedelta(minutes=60))
        start time += timedelta(minutes=30)
    value = 100000
    print(f"Minutes out of safe: {safe.total_minutes_out:.1f} min")
    print(f"Adjusted annual rate: {safe.adjusted annual rate():.4f}%")
    print(f"Monthly premium: ${safe.monthly premium(value):.2f}")
```

- Tracks the minutes outside of safe
- Gives an adjusted annual rate and monthly payment with the given example of a \$100,000 watch
- Tracking door openings and closings for total time outside of the safe and wears

Thank You!

