TTRACK
ACADEMIC PROGRESS TRACKER

Smartly matcher between
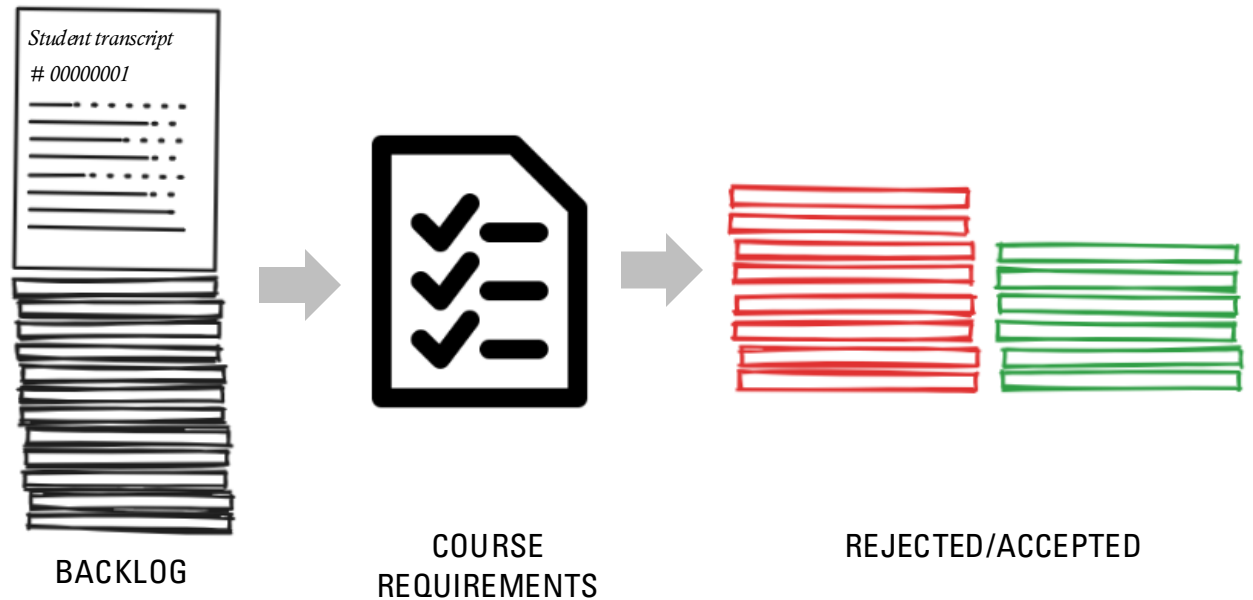
Student Curriculums X Course Requirements

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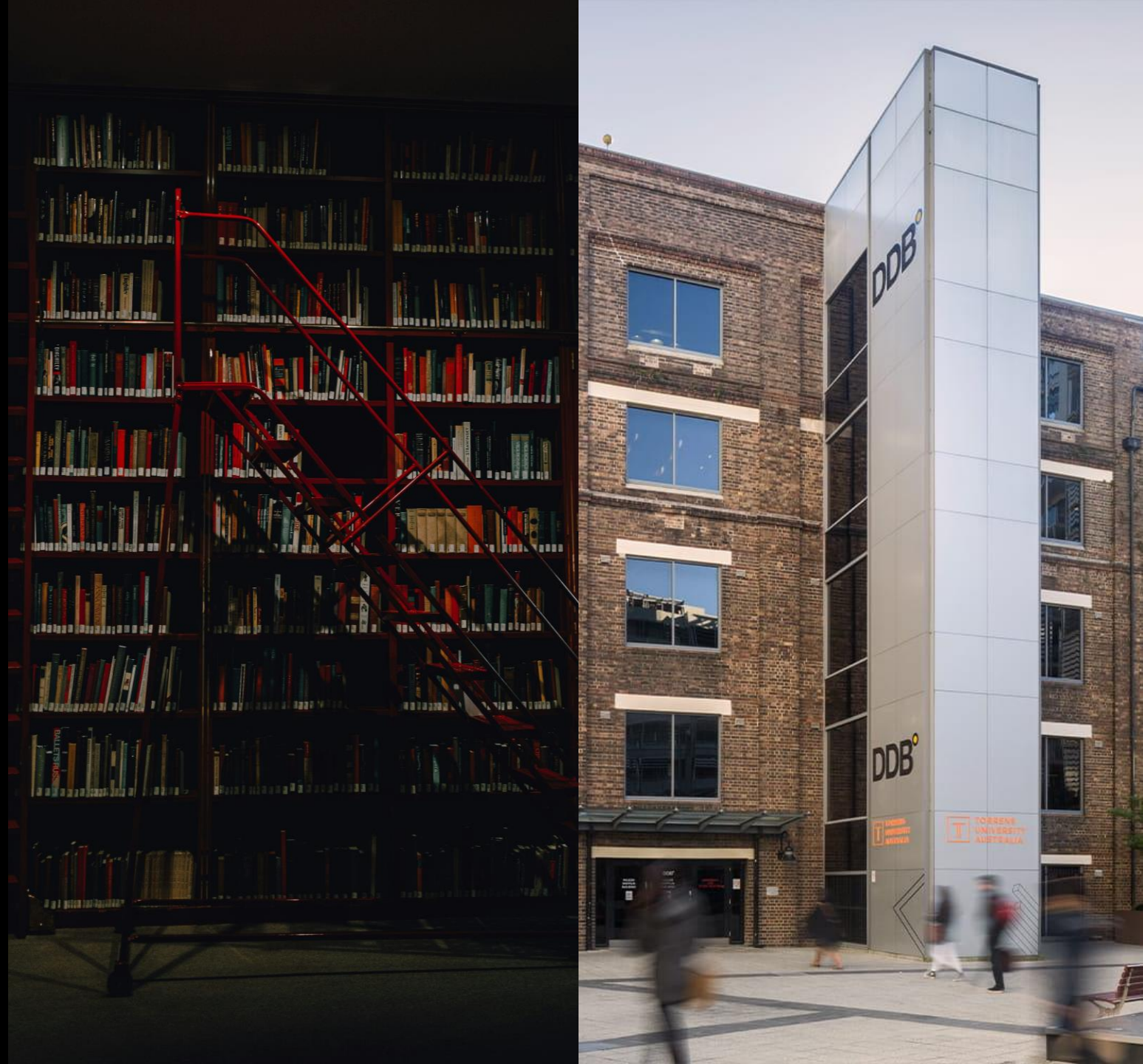
PROBLEM STATEMENT

Advisors and Students lack real-time clarity on degree progress.

Student transcript
00000001

BACKLOG

COURSE
REQUIREMENTS

REJECTED/ACCEPTED

Transcript checks are manual, slow, error-prone and lead to academic uncertainty.

PROPOSED SOLUTION

FROM +30 MINUTES TO A FEW SECONDS!

We automated academic tracking by matching *student transcripts* to *curriculums* with precision & clarity, powered by *intelligent data processing*.

SYSTEM ARCHITECTURE
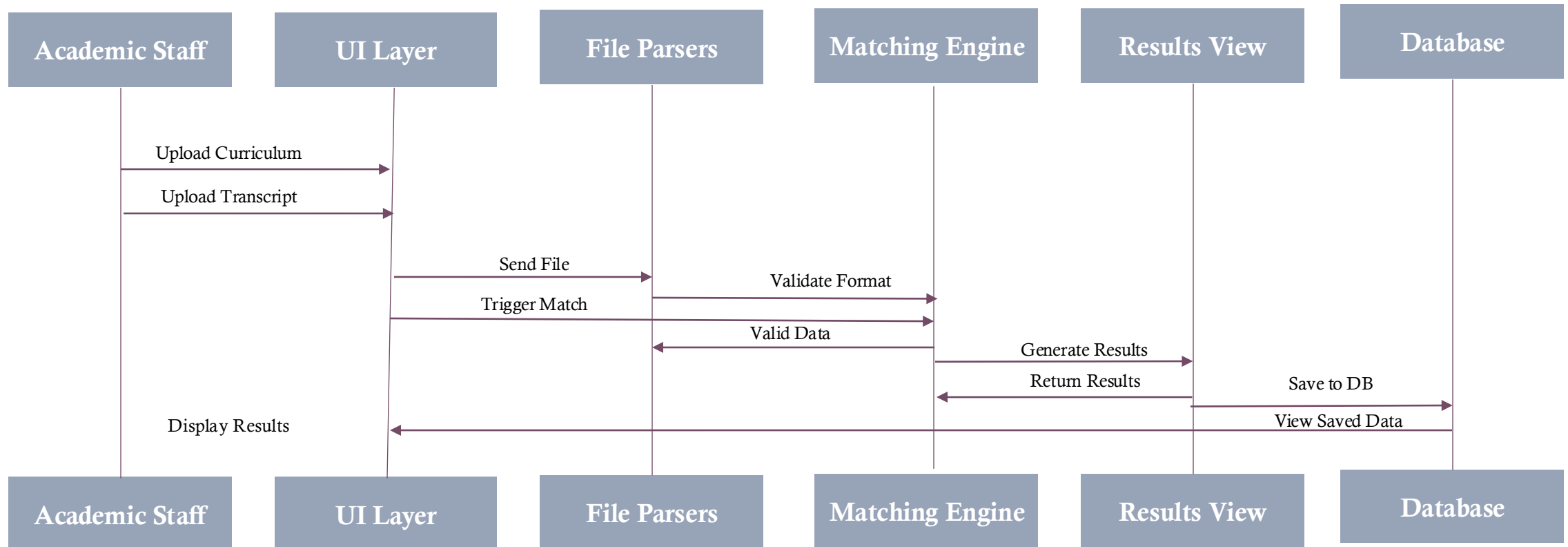
Our modular, event-driven architecture follows SOLID principles:

— UI, logic and data isolated for testability, scalability and future cloud integrations.

KEY
FEATURES

Upload.

Match.

Visualize.

Export.

From matching engine to elective suggestions...

TTrack delivers actionable academic insights.

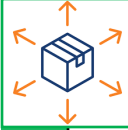# TESTING AND VALIDATION

Pytest-covered modules, edge case validation and live usability testing were used to ensured quality across transcript structures and curriculum formats.

OUTCOMES... FUTURE WORK

PyQt5 + pandas integration

v1.0.0

- PyQt5 + pandas integration
- Light/dark mode support
- File upload and preview with pandas
- Matching engine: transcript x curriculum
- Build scripts for Windows and macOs
- Pytest setup

Supabase BaaS Integration

v2.0.0

- Electron version for testing
- Database backend using PostgreSQL
- User Authentication: Login/Register
- Layered Architecture
- Cloud Sync: Fallback and encryption
- Pytest 2.0

Distribution & Engine 2.0

v3.0.0

- Layered Architecture
- Cloud Sync: Fallback and encryption
- Matching Engine 2.0
- Pytest 2.0

AI Enhancement

v4.0.0

- API integration: uni ecosystem
- Semantic matching: NLP based
- Predictive analytics: forecasting
- Recommendation engine
- Machine Learning

Enterprise Scale

v5.0.0

- Multi-tenant architecture institution-wide
- Advanced analytics with BI dashboards
- Integration APIs
- Web application
- Mobile application

DEMO INSTRUCTIONS

In this live demo, we will:

1. Create an account and login

2. Upload a transcript

3. Match it to a curriculum

4. Explore results

5. Export insights

5. Save in database and locally

6. Retrieve saved data

THANK YOU!

Shout Out to the Open-Source Community!

TTrack is built on top of these awesome libraries:

pandas
supabase
pytest

SCAN TO SHARE YOUR THOUGHTS!

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