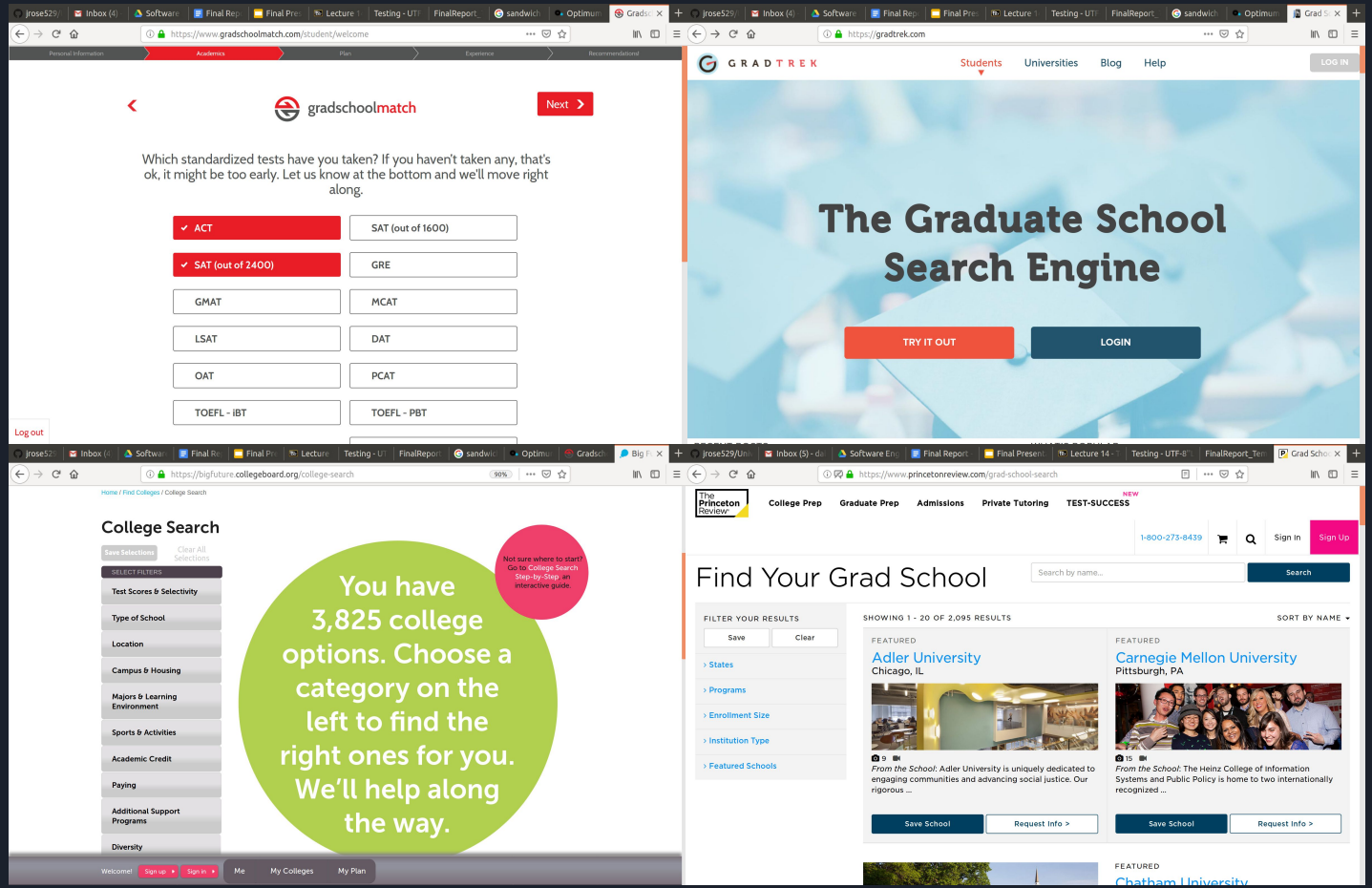
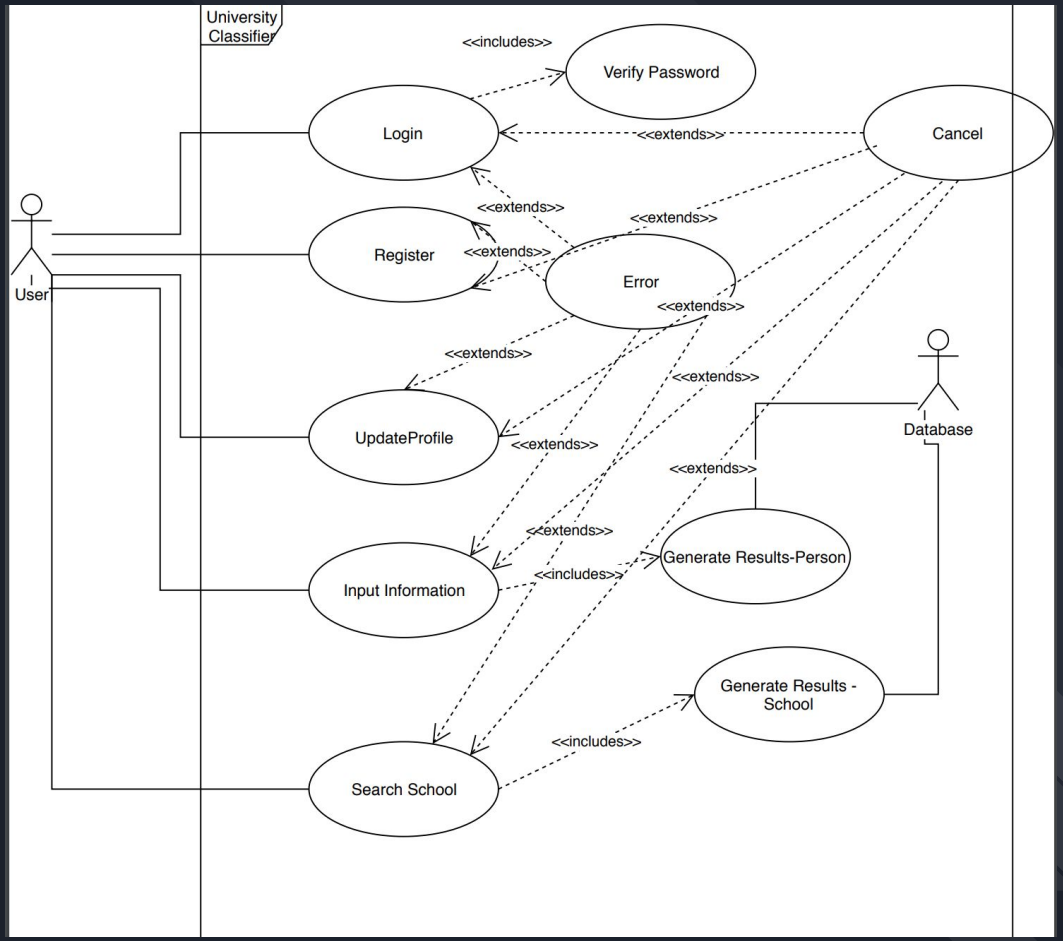
Final Presentation

University Classifier

Inception


https://www.gradschoolmatch.com/student/welcome
gradschoolmatch
Next
Which standardized tests have you taken? If you haven't taken any, that's ok, it might be too early. Let us know at the bottom and we'll move right along.
ACT
SAT (out of 1600)
SAT (out of 2400)
GRE
GMAT
MCAT
LSAT
DAT
OAT
PCAT
TOEFL - iBT
TOEFL - PBT
Log out
https://gradtrek.com
GRADTREK
Students
Universities
Blog
Help
LOG IN
The Graduate School Search Engine
TRY IT OUT
LOGIN
https://bigfuture.collegeboard.org/college-search
College Search
Save Selections
Clear All Selections
SELECT FILTERS
Test Scores & Selectivity
Type of School
Location
Campus & Housing
Majors & Learning Environment
Sports & Activities
Academic Credit
Paying
Additional Support Programs
Diversity
You have 3,825 college options. Choose a category on the left to find the right ones for you. We'll help along the way.
Not sure where to start? Go to College Search Step-by-Step an interactive guide.
Welcome!
Sign up
Sign in
Me
My Colleges
My Plan
https://www.princetonreview.com/grad-school-search
The Princeton Review
College Prep
Graduate Prep
Admissions
Private Tutoring
TEST-SUCCESS
NEW
1-800-273-8439
Sign In
Sign Up
Find Your Grad School
Search by name...
Search
FILTER YOUR RESULTS
Save
Clear
States
Programs
Enrollment Size
Institution Type
Featured Schools
SHOWING 1 - 20 OF 2,095 RESULTS
SORT BY NAME
FEATURED
Adler University
Chicago, IL
From the School: Adler University is uniquely dedicated to engaging communities and advancing social justice. Our rigorous ...
Save School
Request Info >
FEATURED
Carnegie Mellon University
Pittsburgh, PA
From the School: The Heinz College of Information Systems and Public Policy is home to two internationally recognized ...
Save School
Request Info >
FEATURED
Chatham University

Use Case


University Classifier
<<includes>>
Verify Password
Login
<<extends>>
Cancel
<<extends>>
<<extends>>
Register
<<extends>>
Error
<<extends>>
User
<<extends>>
<<extends>>
Database
UpdateProfile
<<extends>>
<<extends>>
<<extends>>
Generate Results-Person
Input Information
<<includes>>
Generate Results - School
<<includes>>
Search School

How It Works

Training

We trained a neural network on a dataset of 500 student's graduate school application and the percent chance of admission to schools.

User Input

User creates an account and inputs their academic information. This is fed to the neural network.

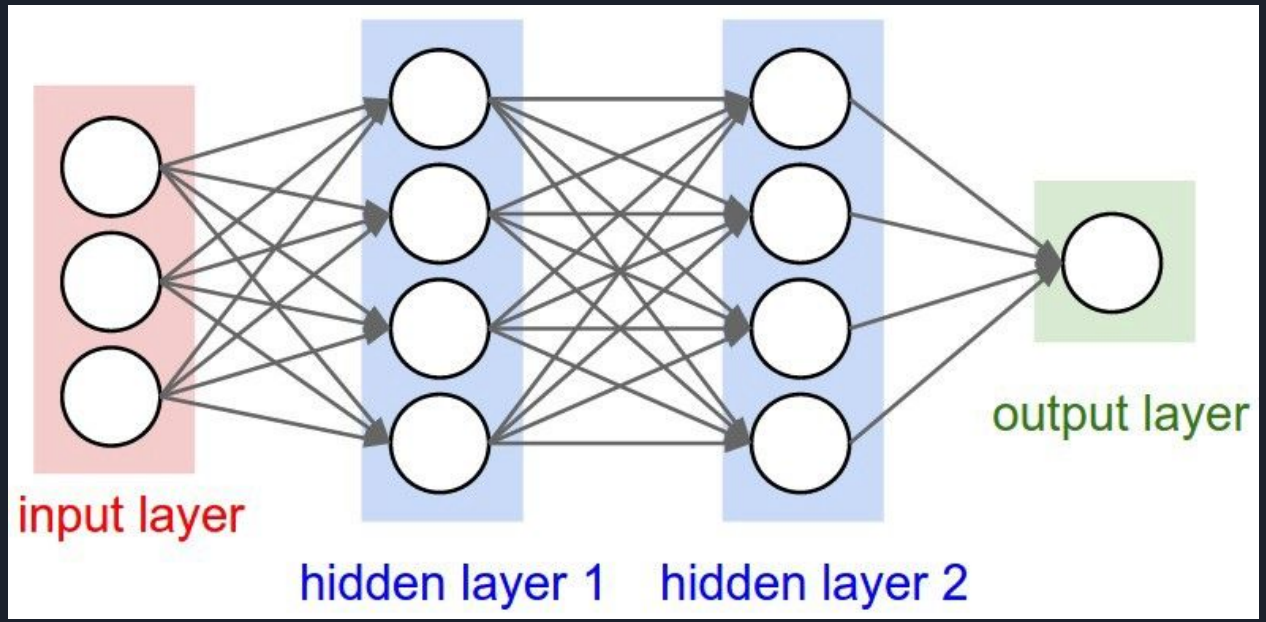
Result

Neural network returns a list of schools with the student's percent chance of admission to each

Algorithm

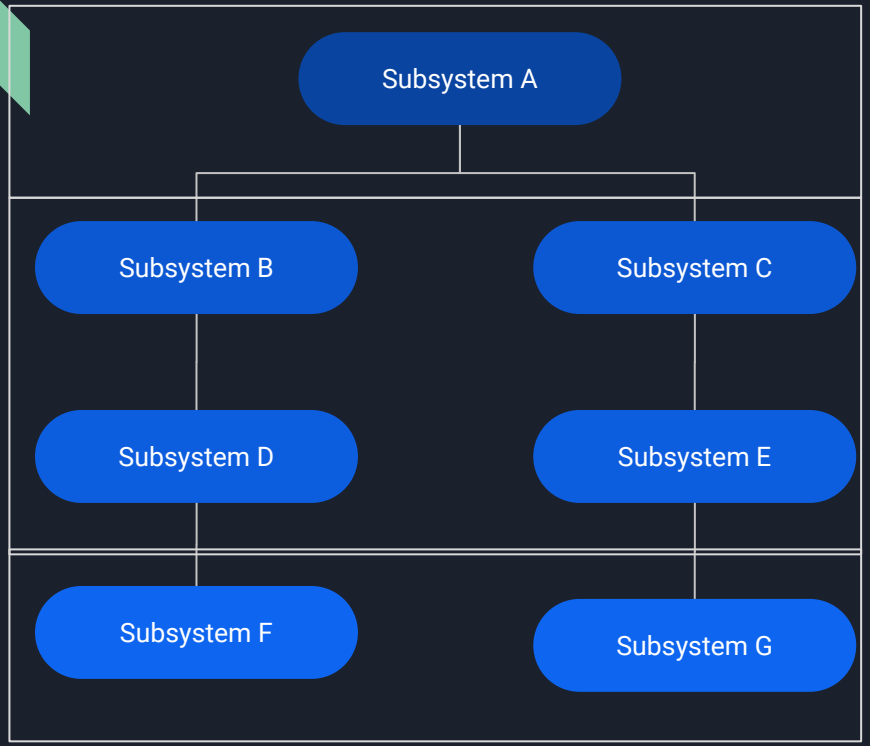
```
model = keras.Sequential([
  layers.Dense(64, activation=tf.nn.relu, input_shape=[7]),
  layers.Dense(64, activation=tf.nn.relu),
  layers.Dense(1)
])
```

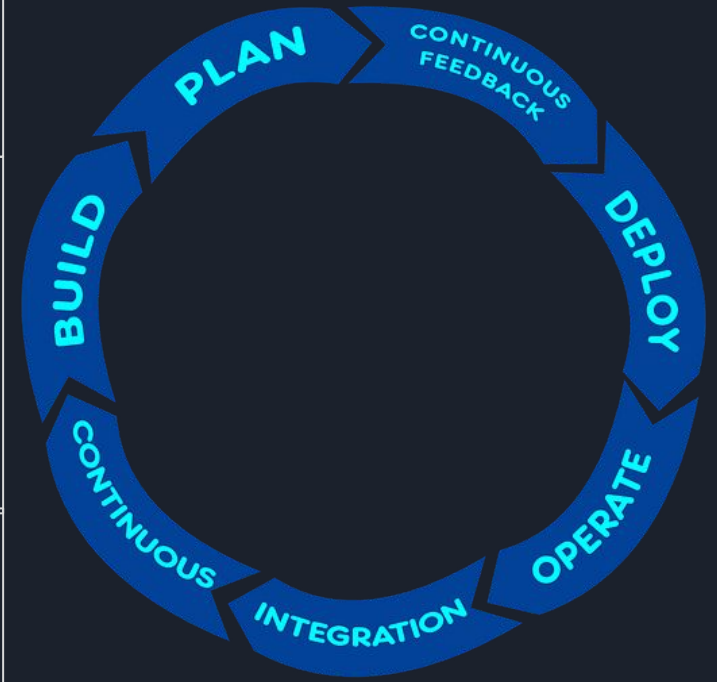
GRE Score	337
TOEFL Score	118
University Rating	4
SOP	4.5
LOR	4.5
CGPA	9.65
Research	1



Chance of Admit	0.92

Project Workflow



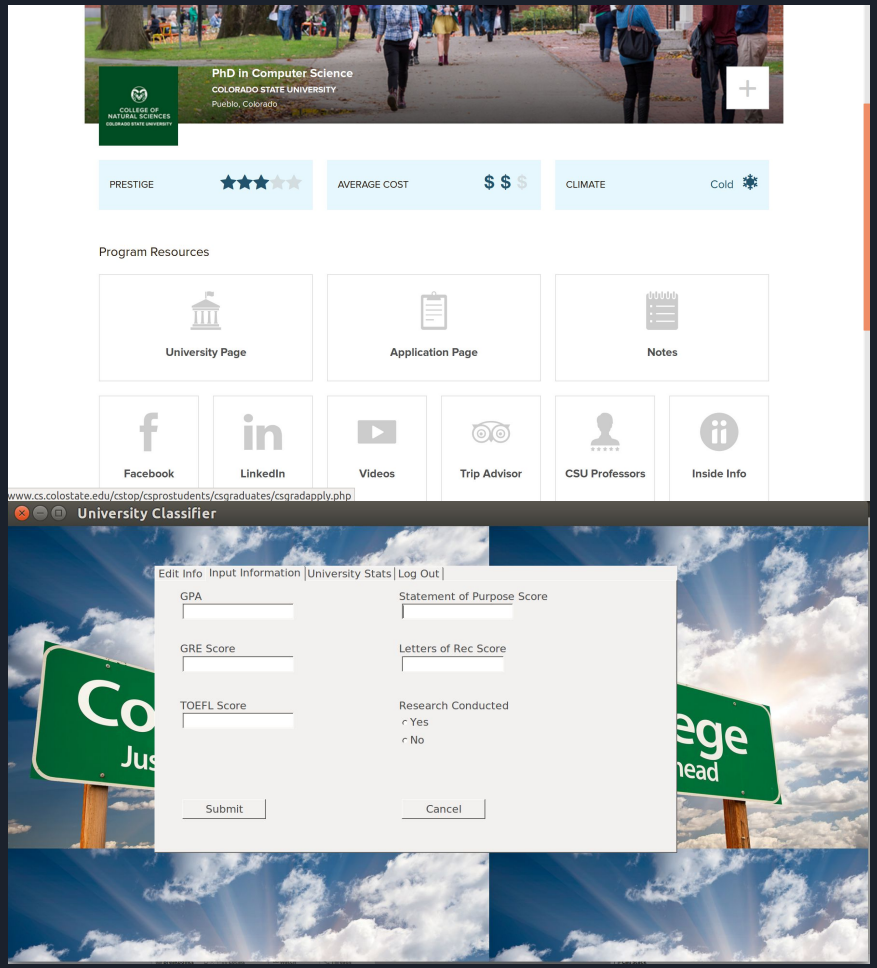


Challenges

- Switching from MySQL to Microsoft SQL
- Losing the Tensorflow workspace
- Limited data to train algorithm
- Using dataset with arbitrary school ranking system
- Exporting python data to C#
- Coordinating group meetings

Why us?

- Complement already-existing software
  - Gradtrek matches you with programs you're interested in
- Much more usable than similar programs
  - GradSchoolMatch - 2 clicks as opposed to 10+



Extensions

- Location
- Program of Study
- Cost
- Train algorithm with more student data
- Statement of Purpose/ Letters of Recommendation ranking system

Lessons Learned

- Backups are important!
- Be sure to research how/if components can be integrated before starting work
- Communication is key
- Research existing technology before developing your own

Advanced Courses

In the future, we hope to learn at least some of the following

- Using AGILE in a team setting
- Code of ethics
- Thorough QA of code
- Learn more about maintenance of code after release

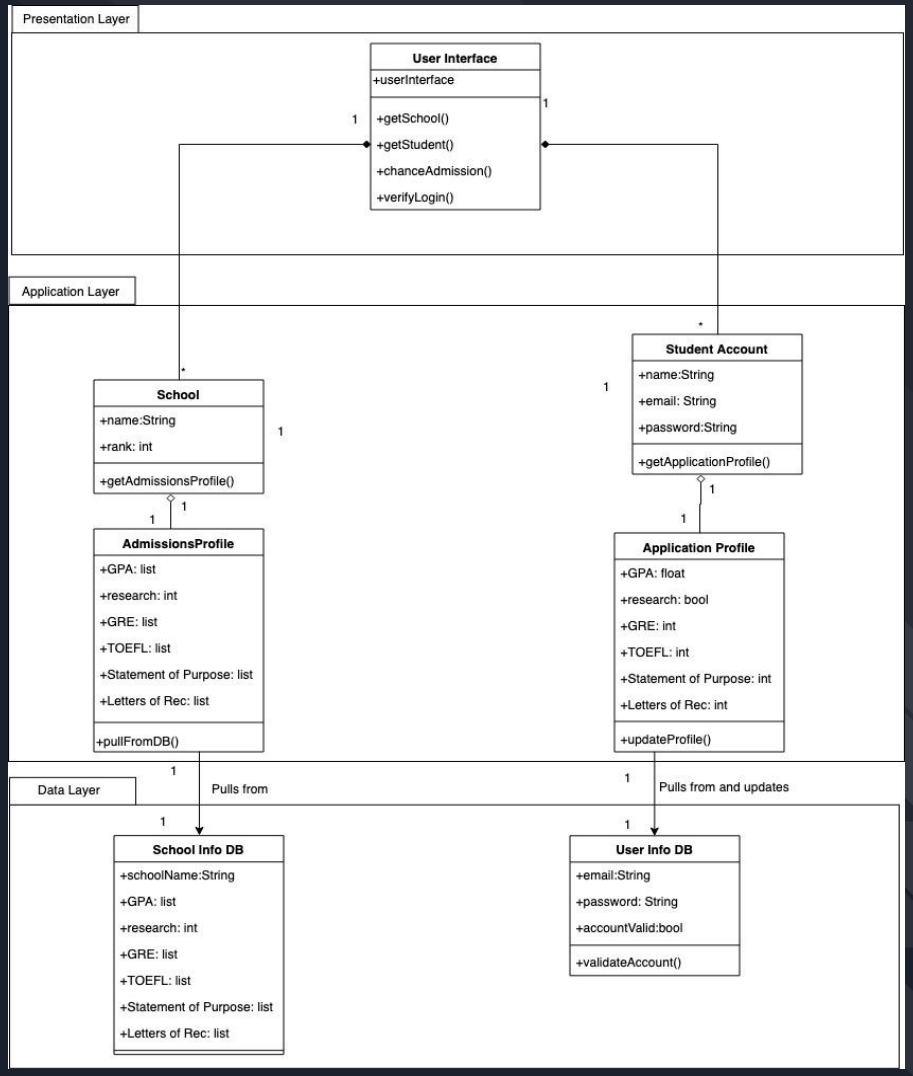
Demonstration

Extra Slides

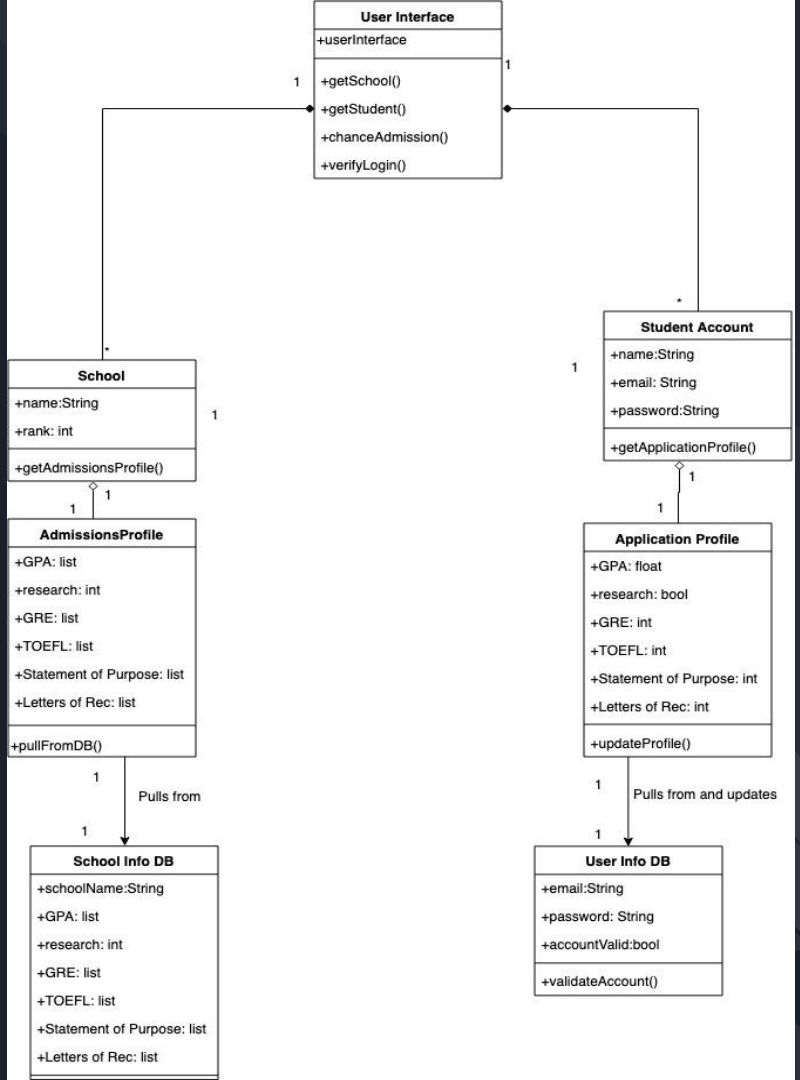
Gantt Chart

TASK NAME	START DATE	END DATE	DAYS INTO PROJECT*	DURATION* (WORK DAYS)	TEAM MEMBER	PERCENT COMPLETE	DAYS COMPLETE*	DAYS REMAINING*
Documentation Work								
Proposal	1/8	1/15	8	7	All	100%	7	0
Software Requirements Specification	1/16	2/14	16	30	All	100%	30	0
Class Diagram	2/1	2/21	31	21	All	100%	21	0
Sequence Diagram	2/15	2/21	31	7	All	100%	7	0
State Machine	2/15	2/21	31	7	All	100%	7	0
Wire Framing	2/13	2/15	31	3	All	100%	3	0
Functional Requirements								
Create university database	2/21	3/2	51	10	Marissa	100%	10	0
Create an account	2/17	3/14	47	26	Jensen	100%	26	0
Log into account	2/17	3/14	47	26	Jensen	100%	26	0
Update profile	3/3	3/14	63	12	Jensen	100%	12	0
Input scores and recieve list	3/3	3/14	63	12	Stockton	100%	12	0
Search for Specific School	3/15	3/30	75	16	Jensen	100%	16	0
Cancel	3/15	3/30	75	16	Jensen	100%	16	0
Error page	3/15	3/30	75	16	Jensen	100%	16	0
Testing								
Test creating an account	4/1	4/11	91	11	Felix	100%	11	0
Test logging into the created account	4/1	4/11	91	11	Sumer	100%	11	0
Test updating profile	4/1	4/11	91	11	Marissa	100%	11	0
Test inputing scores	4/1	4/11	91	11	Marissa	100%	11	0
Check accuracy of result list	4/1	4/11	91	11	Stockton	100%	11	0
Test searching for school	4/1	4/11	91	11	Felix	100%	11	0
Check accuracy of school results	4/1	4/11	91	11	Sumer	100%	11	0
Test error functionality	4/1	4/11	91	11	Marissa	100%	11	0
Test cancel functionality	4/1	4/11	91	11	Felix	100%	11	0
Test response time	4/1	4/11	91	11	Stockton	100%	11	0
Test system crash does not result in data loss	4/1	4/11	91	11	Felix	100%	11	0

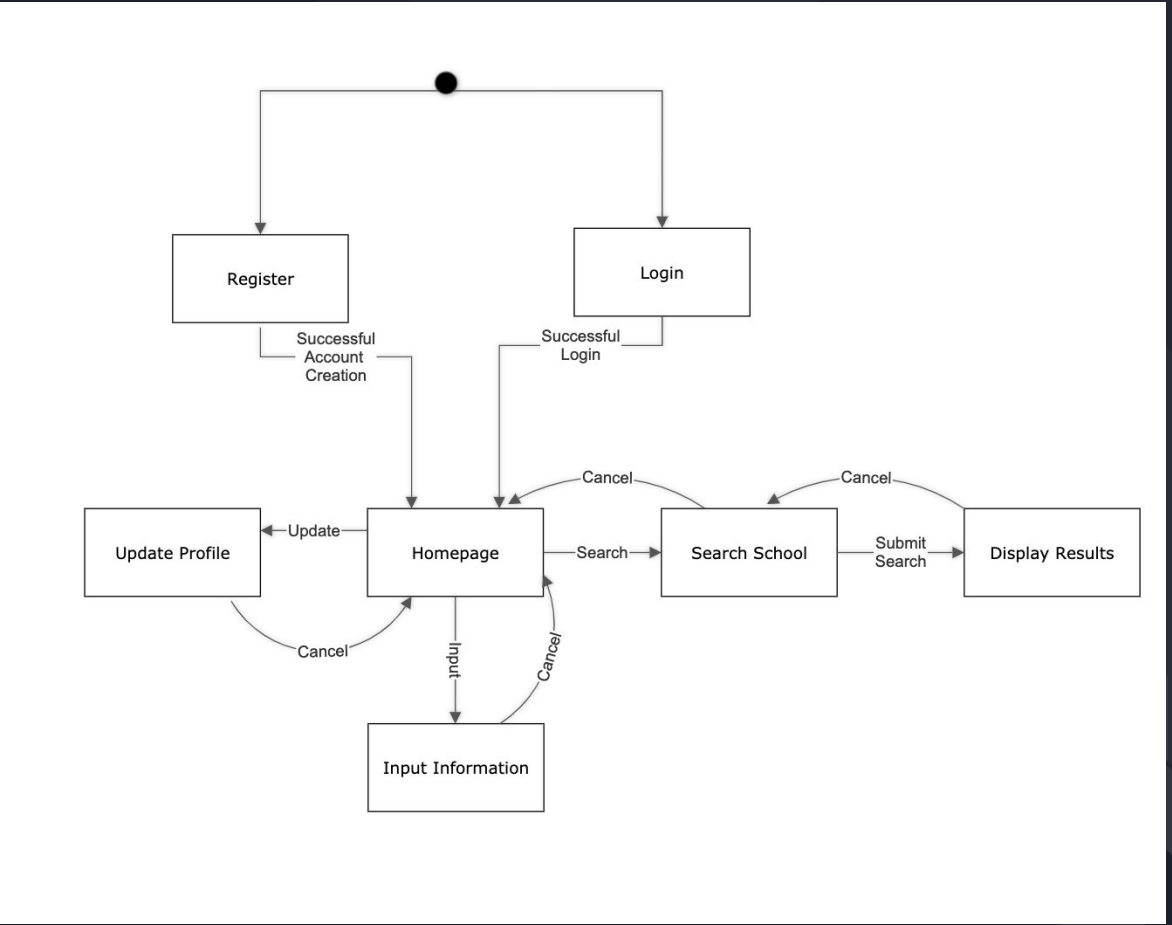
Subsystem


Presentation Layer
User Interface
+userInterface
+getSchool()
+getStudent()
+chanceAdmission()
+verifyLogin()
Application Layer
School
+name:String
+rank: int
+getAdmissionsProfile()
AdmissionsProfile
+GPA: list
+research: int
+GRE: list
+TOEFL: list
+Statement of Purpose: list
+Letters of Rec: list
+pullFromDB()
Student Account
+name:String
+email: String
+password:String
+getApplicationProfile()
Application Profile
+GPA: float
+research: bool
+GRE: int
+TOEFL: int
+Statement of Purpose: int
+Letters of Rec: int
+updateProfile()
Data Layer
Pulls from
Pulls from and updates
School Info DB
+schoolName:String
+GPA: list
+research: int
+GRE: list
+TOEFL: list
+Statement of Purpose: list
+Letters of Rec: list
User Info DB
+email:String
+password: String
+accountValid:bool
+validateAccount()

Class Diagram



State Machine



Sequence Diagram