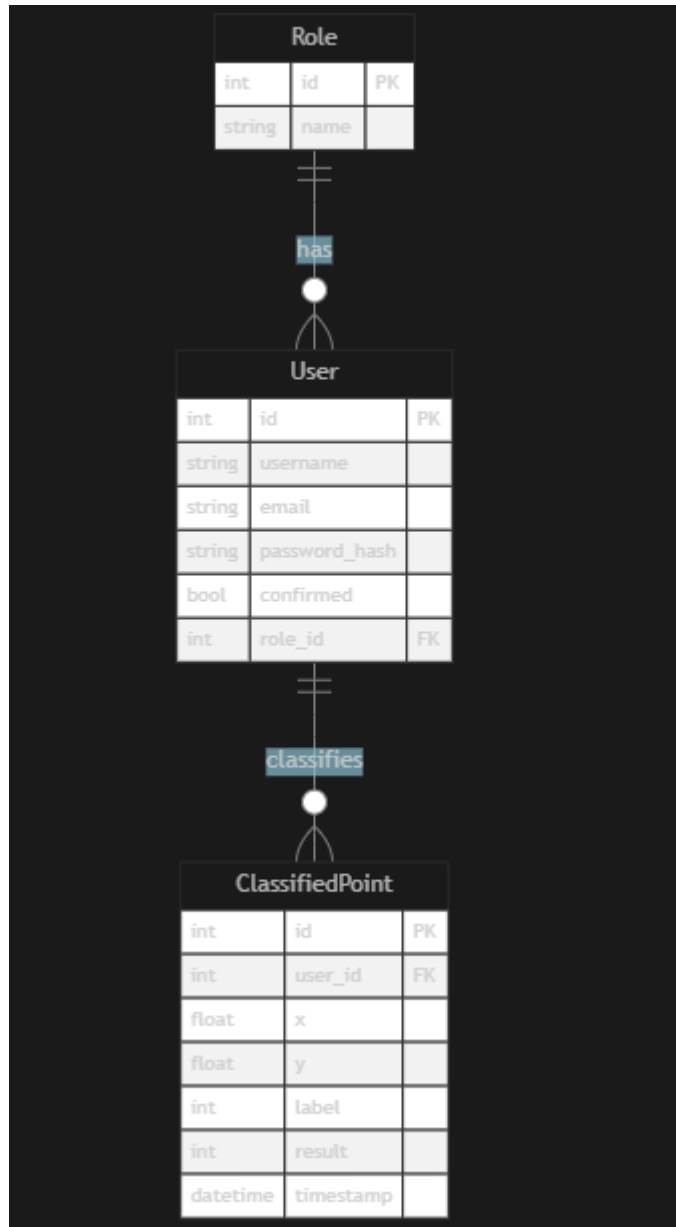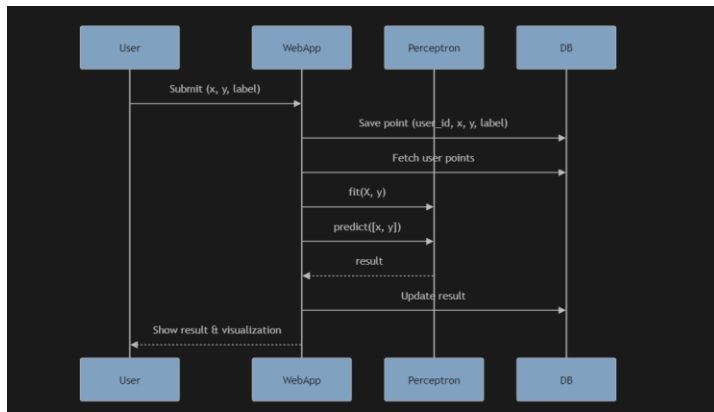# Final Report

1.ERD Diagram
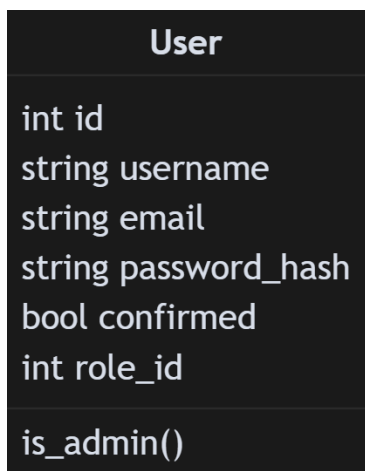
2.Sequence diagram

3. UML Class Diagram:Role
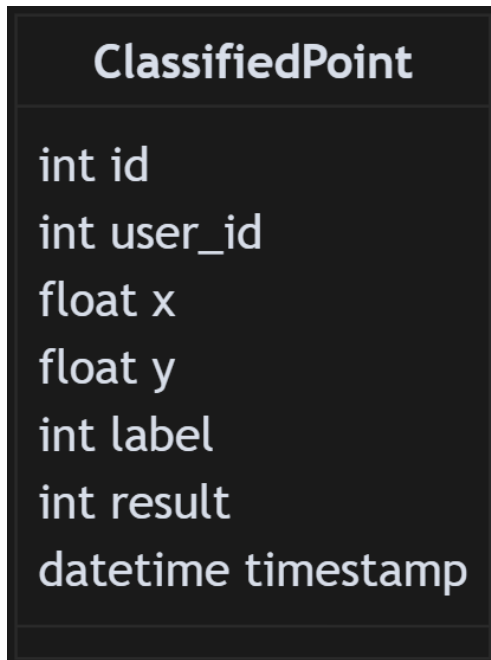
Role

int id
string name
users

4.UML Class Diagram:User

User

int id
string username
string email
string password_hash
bool confirmed
int role_id

is_admin()
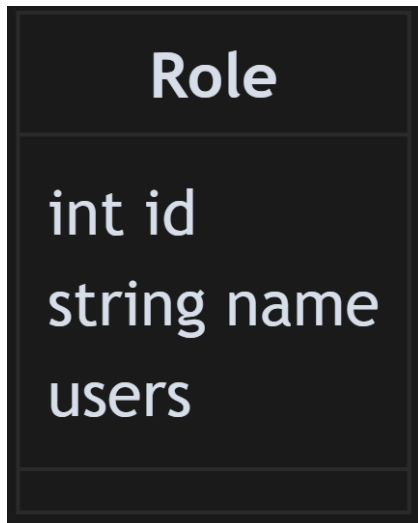
5. UML Class Diagram: ClassifiedPoint

```
ClassifiedPoint
int id
int user_id
float x
float y
int label
int result
datetime timestamp
```

6. Users stories

```
1. As a new user, I want to register and confirm my email so that I can access
the app.
2. As a user, I want to log in and log out securely so that my data is
protected.
3. As a user, I want to classify 2D points so that I can see how the AI works.
4. As a user, I want to view my classification history so that I can track my
progress.
5. As a user, I want to visualize my classified points on a chart so that I
can better understand the results.
6. As an admin, I want to view all users so that I can manage the platform.
7. As an admin, I want to edit or delete users so that I can maintain data
integrity.
8. As a user, I want to edit my profile so that I can keep my information up
to date.
9. As a user, I want to reset my password if I forget it so that I can regain
access.
10. As an admin, I want to view all classification results so that I can
monitor system usage.
```

7. Sprint logs

Week 1

- **Sprint Goal:** Set up project repository, initialize Flask app, and define initial database models.

- **Tasks Completed:**

  - Created GitHub repository and set up project structure

- Initialized Flask app with blueprints

- Defined User, Role, and ClassifiedPoint models

- **Tasks In Progress:**

- Initial database migration scripts

- **Tasks Planned for Next Week:**

- Complete database migrations

- Implement user registration and login

- **Blockers/Issues:**

- Some team members had issues installing dependencies on Windows

- **Retrospective Notes:**

- Good team communication; need to clarify coding standards for next sprint

---

Week 2

- **Sprint Goal:** Implement user authentication and basic point classification functionality.

- **Tasks Completed:**

- User registration, login, and logout

- Email confirmation for new users

- Basic form for submitting 2D points

- **Tasks In Progress:**

- Integration of Perceptron AI module

- **Tasks Planned for Next Week:**

- Complete AI integration

- Add user profile editing

- Start work on admin dashboard

- **Blockers/Issues:**

- Delay in receiving email confirmation due to Gmail SMTP settings

- **Retrospective Notes:**

- Authentication flow works well; need to improve test coverage

---

Week 3

- **Sprint Goal:** Finalize AI integration and implement admin dashboard.

- **Tasks Completed:**

- Integrated Perceptron for point classification

- Visualized classified points on dashboard

- Admin dashboard with user management

- **Tasks In Progress:**

- Error handling and custom error pages

- **Tasks Planned for Next Week:**

- Polish UI with Bootstrap

- Write documentation and user stories

- Prepare diagrams for final report

- **Blockers/Issues:**

- Some confusion over admin permissions; resolved after team discussion