BCNF Relational Schema

Owner:(<u>user_id: PK</u>, firstName: VARCHAR, lastName: VARCHAR, IP address: VARCHAR, email:VARCHAR, phone: VARCHAR, *farmer_id: FK, manager_id: FK, organization_id: FK*)
Farmer: (<u>farmer_id: PK</u>)
FarmManager: (<u>manager_id: PK</u>)
AgriculturalOrganization: (<u>organization_id: PK</u>)
IrrigationSolution: (<u>solution_id: PK</u>, *visualization_id: FK*, information: BLOB, *user_id: FK*)
Insights: (<u>insight_id: PK</u>, insights: BLOB)
Analyst: (<u>analyst_id: PK</u>, concentration: TEXT, *engineer_id: FK, specialist_id: FK*)
EnvironmentalSpecialist: (<u>specialist_id: PK</u>)
Bioengineer: (<u>engineer_id: PK</u>)
Accesses: (*analyist_id: FK, visualization_id:FK*)
Visualization: (<u>visualization_id: PK</u>, image: *artFile)
Algorithm: (<u>algorithm_id: PK</u>)
Analyzes: (*algorithm_id: FK, farm_id: FK*)
Farm: (<u>farm_id: PK</u>, *factors_id: FK, region_id: FK, plant_id: FK*, location: coordinates)
product of: (*crop_id: FK, farm_id: FK*)
Crop: (<u>crop_id: PK</u>, Name: VARCHAR, Requirements: BLOB, *health_id: FK, yield_id: FK*)
CropHealth: (<u>health_id: PK</u>, diseases: TEXT, health: BLOB)
CropYield: (<u>yield_id: PK</u>, yield: NUMBER)
EnvironmentalFactors: (<u>factors_id: PK</u>, *coverage_id: FK, moisture_id: FK, humidity_id: FK*, time: NUMBER)
RainCoverage: (<u>coverage_id: PK</u>, inchesOfRain: NUMBER, location: coordinates)
SoilMoisture: (<u>moisture_id: PK</u>, waterSaturation: NUMBER)
Humidity: (<u>humidity_id: PK</u>, humidity: NUMBER)
GeologicalRegion: (<u>region_id: PK</u>, *coverage_id: FK, climate_id: FK*, location: coordinates)
Climate: (<u>climate_id: PK</u>, data: VARCHAR)
SoilType: (<u>soil_id: PK</u>, type: TEXT)