ACUPUNCTURE3D

Teammembers

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Supervisor

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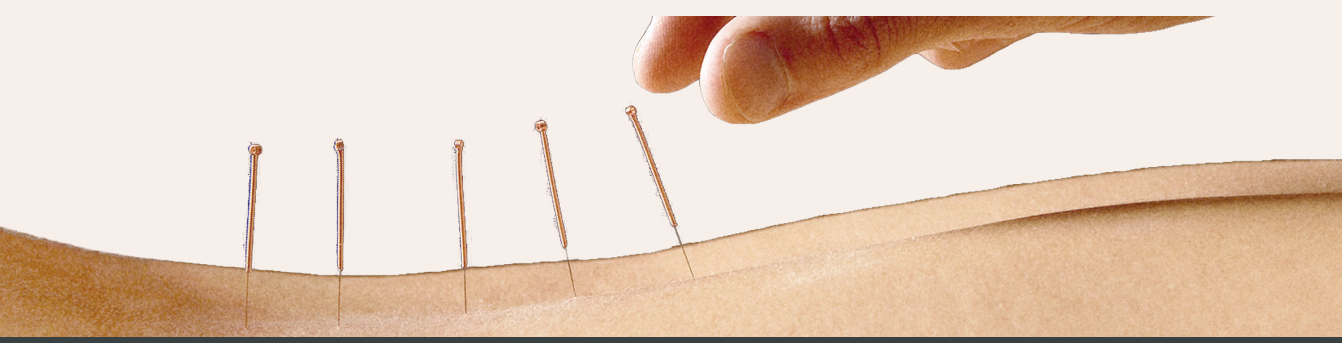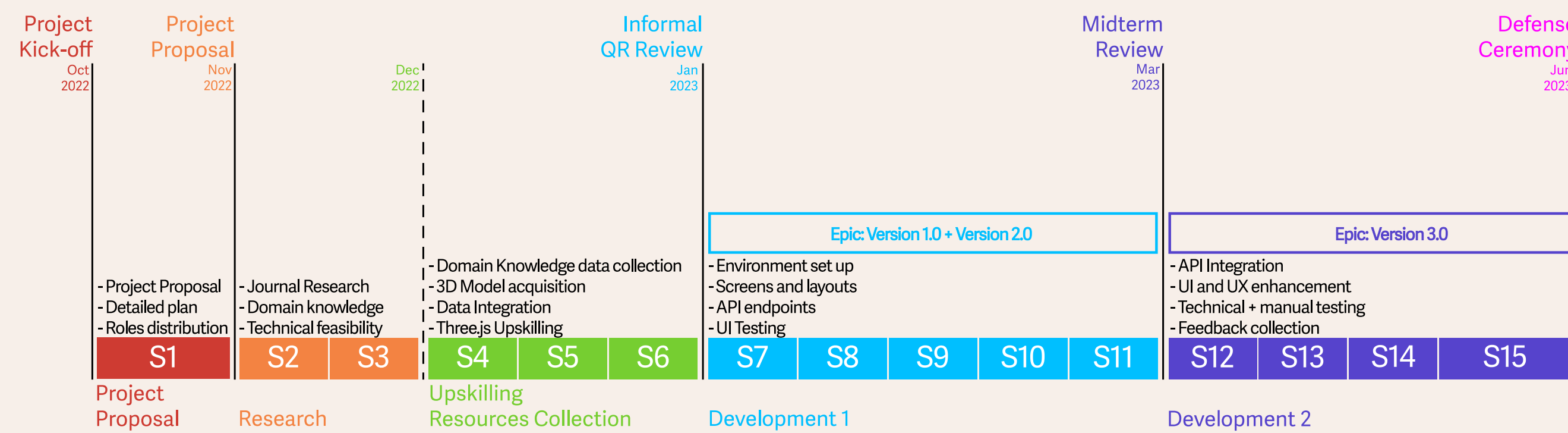Dr. Vu Lam Quang

Objectives

Our team's project has the goal of providing companionships to traditional medical university students, assisting them to learn about acupuncture. This website offers a 3D model to visualize the acupuncture points and meridians system of the human body, as well as some fundamental features that support more efficient and interactive ways to learn about the accupuncture field.
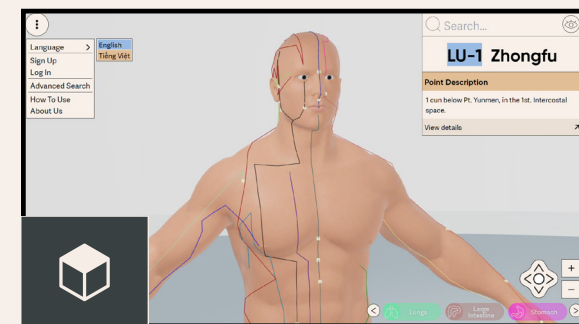
Timeline

- Project Kick-off — Oct 2022
- Project Proposal — Nov 2022
- Dec 2022
- Informal QR Review — Jan 2023
- Midterm Review — Mar 2023
- Defense Ceremony — Jun 2023

S1
- Project Proposal
- Detailed plan
- Roles distribution

S2 / S3 — Project Proposal / Research
- Journal Research
- Domain knowledge
- Technical feasibility

S4 / S5 / S6 — Upskilling Resources Collection
- Domain Knowledge data collection
- 3D Model acquisition
- Data Integration
- Three.js Upskilling

S7 / S8 / S9 / S10 / S11 — Development 1 — Epic: Version 1.0 + Version 2.0
- Environment set up
- Screens and layouts
- API endpoints
- UI Testing

S12 / S13 / S14 / S15 — Development 2 — Epic: Version 3.0
- API Integration
- UI and UX enhancement
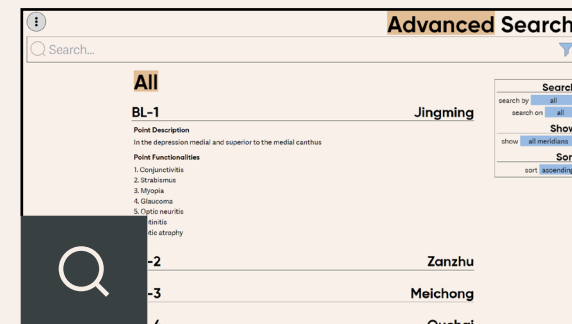- Technical + manual testing
- Feedback collection

Achievements

- Understood fundamental acupuncture knowledge.
- Applied user-first design thinking techniques.
- Developed a website twith an interactive 3D human body model.
- Resolved all challenges & difficulties.
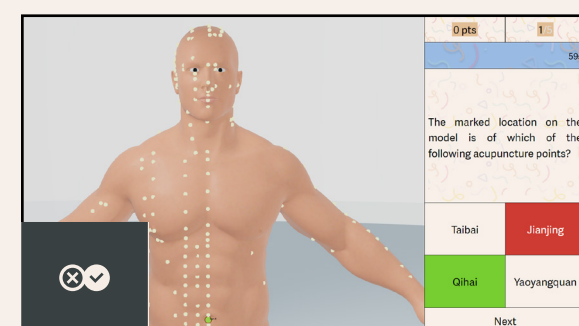- Enhanced team's technical skills and soft skills.

Difficulties

- Disparity between practice and theory.
- Client withdrawal.
- New to the techology.
- Lack of fundings.

Feature List

3D Interactive Model
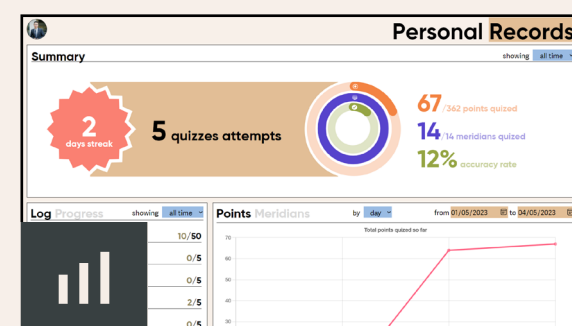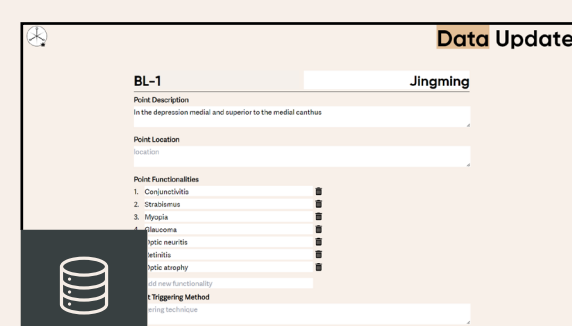with 362 acupuncture points and 14 meridians marked

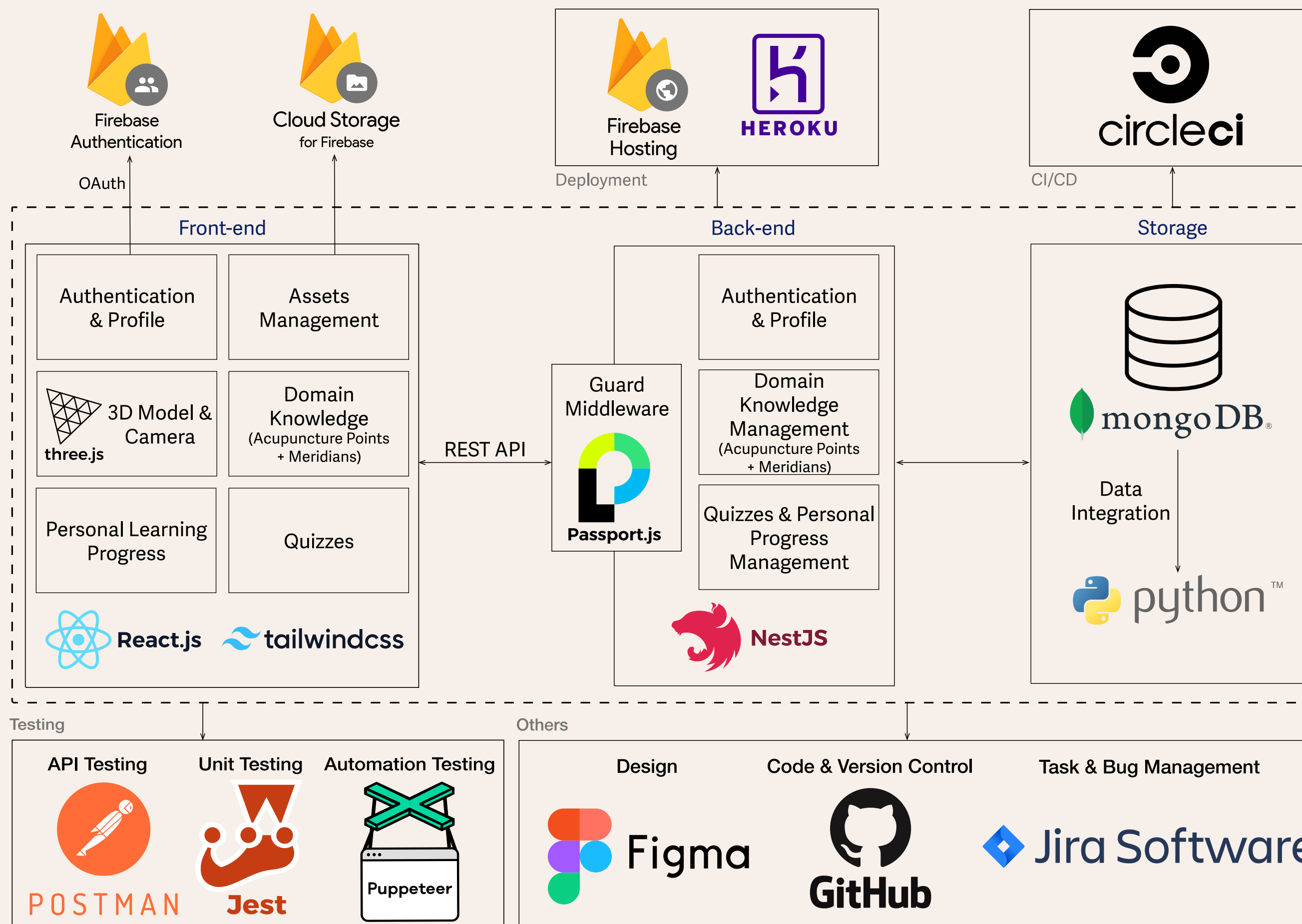**Acupuncture Domain Knowledge Search System**

Interactive Quizzes

Personal Learning Progress Management

Data Management
(for Admins)

Architecture

Firebase Authentication — OAuth

Cloud Storage for Firebase

Firebase Hosting / HEROKU — Deployment

circleci — CI/CD

Front-end
- Authentication & Profile
- Assets Management
- 3D Model & Camera — three.js
- Domain Knowledge (Acupuncture Points + Meridians)
- Personal Learning Progress
- Quizzes
- React.js / tailwindcss

REST API

Back-end
- Guard Middleware — Passport.js
- Authentication & Profile
- Domain Knowledge Management (Acupuncture Points + Meridians)
- Quizzes & Personal Progress Management
- NestJS

Storage
- mongoDB
- Data Integration
- python

Testing
- API Testing — POSTMAN
- Unit Testing — Jest
- Automation Testing — Puppeteer

Others
- Design — Figma
- Code & Version Control — GitHub
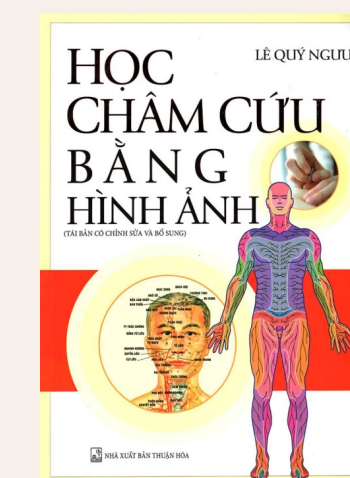- Task & Bug Management — Jira Software

User Feedbacks

Nguyen Van A
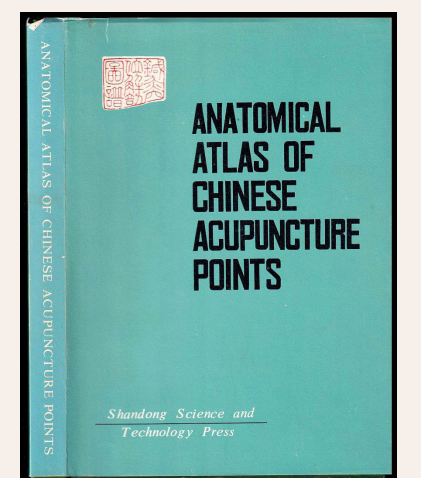6th year student at Traditional Medical University

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References

Lê Quý Ngưu
Học Châm Cứu Bằng Hình Ảnh

China Shandong Medical College
Anatomical atlas of Chinese Acupuncture Points