江西理工大学 信息工程学院

JIANGXI UNIVERSITY OF SCIENCE AND TECHNOLOGY SCHOOL OF INFORMATION ENGINEERING

Mobile application development

移动应用开发

Lecture 00:

INTRO TO APP INVENTOR

Prof Associate ,
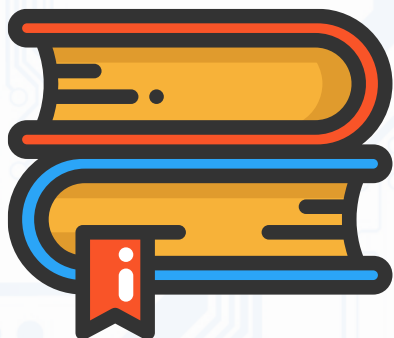School of information engineering Jiangxi university of science and technology, China

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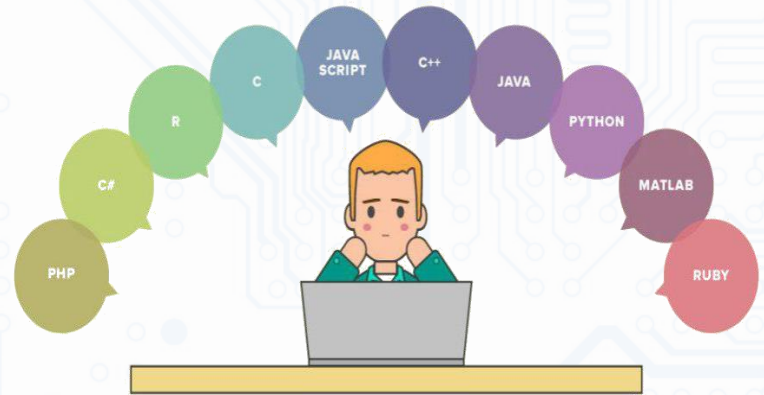
移动应用开发

LECTURE 01: **Course introduction**

App Inventor

你好

Nǐ hǎo

- Let us have a brief view to our course

- Don't worry we will learn lots of thing this semester

FASTEN YOUR SEAT BELTS.

App Inventor

Who Am I?

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App Inventor

Course Meeting Times

Subject: Mobile application development 移动应用开发

DINGTALK Lectures

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Any time you can ask
I will answer ASAP

Class Management

App Inventor

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DrAjm(阿塔) 👤
Jiangxi Ganzhou

DR ajm lectures

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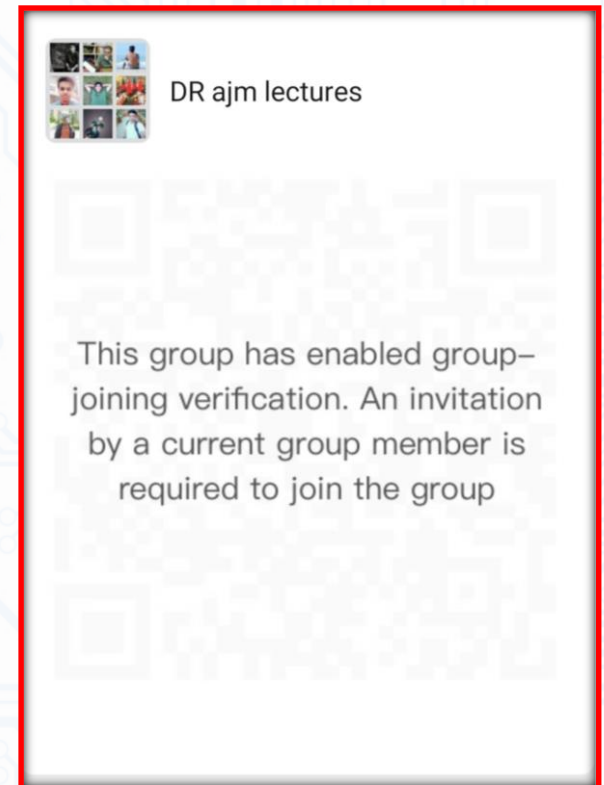
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Advanced Feature list of a Mobile App

1) **Voice search**
2) **Location**
3) **Face detection**
4) **Incorporate Analytics**
5) **Social Integration**
6) **Augmented Reality**
7) **AI integration**
8) **Personalization options**
9) **Working Offline**
10) **More Touch**
11) **Easy Payment gateway**

https://www.quytech.com/blog/top-11-key-features-of-a-successful-mobile-app-development/

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Voice search

Voice SearchVoice search option in a mobile application is considered as the best feature. This is a revolutionary option that is transforming the user's experience. The scenario of searching for information has been changed with the advent of voice search. With it, users can verbally command the app to search for new products, services, or anything they would have otherwise done by typing keywords.

Location Tracking

This is the essential feature that an app must possess to automatically detect users' locations and provide them personalized services. The data such as accurate location, time, and place are broadcasted in real-time to focus the users. This is helpful for the brands to target the right customer with the right services. This feature also relieves users from entering their location manually to find out whether the product or service they are looking for is deliverable in their locality or not.

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Face detection:

Gone are the days when users have to enter their email addresses and passwords to log in to their account. It is the technological era, a time where they can do the same just by looking over to their phone. It would be no wrong to say that the technology of this modern time is taking the security protocols beyond the imagination.

By integrating face detection features, app developers can improve the security of the app. Most of the mobile app development companies are choosing face detection as the foremost element of app development.

Incorporate Analytics

Adding a feature to track and identify the actions of the user is another way to be ahead. This is helpful to understand the users' activities to know their interests and to help them with any issue they are facing while searching for a particular product or service. Merging analytics into a mobile application is renders huge benefits mainly from the business prospect.

Social Integration

The feature that connects users to the social platform is what users are passionate about. Thus, sharing on the social platform has become an unavoidable feature for almost all types of mobile applications. By integrating sharing their purchases or feedbacks on the social media platforms, the app can deliver them a more personalized experience.

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Augmented Reality

Augmented reality technology enhances the user experience by offering them a three-dimensional digital content or objects of the real- world perception on mobile platforms. The technology started an era of digital transformation information, with a real-time environment.

Artificial Intelligence Integration

Artificial intelligence is one of the top technologies that have revolutionized almost every industry. By adding AI's touch in your app, you can serve your customers better by suggesting to them the products similar to the one they have added to the cart. You can also show them recommendations and do a lot more to enhance their experience.

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Live to Stream

Today live streaming feature has become one of the essential parts of mobile apps. Users are free to share their experience while using the app. This feature has become one of the main parts of mobile applications. App industry is opting this idea to broadcasting their brands in the real platform.

Personalization Options

The latest mobile applications are redefining the way mobile apps used to be in the past. Personalization feature allows the users to work on an app the way they want. It is all about how much an app understands the users who are looking out for different products or services. This feature empowers the user with flexible settings, fonts, colors, sizes, and many more options.

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Working Offline

This is the advanced feature that an app offers the user to work without an Internet connection. This feature allows the app to balance data and functionality in such condition. The app is integrating with this feature allow users to access the information and deal with the situation when the internet is not available.

More Touch

These days apps demand touch. The less typing the more hassle less working. The user looks for the app with a few touches and more accessibility. They can simply tap to choose from different options rather than typing them manually. Apart from this, you can add various filters and sorting options to narrow down the search criteria of users searching for products and services on your app.

Easy Payment Gateway

A secure payment gateway ensures hassle-free buying for the user. This feature allows paying easily, instantly, and securely, especially from the eCommerce app. The payment gateway feature provides an advantage to the app users to make payment through their credit/debit cards, netbanking, online wallets, and more. This builds trust and loyalty among the brands and the users.

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Bottom line

These days, companies put their best efforts into developing customer-oriented mobile applications that represent businesses globally. There focus is to make every mobile app enticing and unique. Adding advanced features improves users' experience, and thus, brings more customer satisfaction. So, consider the features mentioned in this article while developing a mobile app to make it represent your brand effectively and deliver an outstanding experience to users.
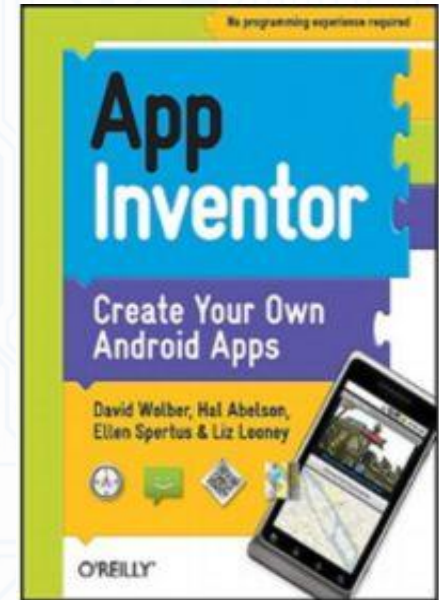
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Reference book

Textbook

App Inventor 2: Create Your Own Android Apps 2nd Edition

by David Wolber , Hal Abelson, Ellen Spertus, Liz Looney

- ISBN-10 : 1491906847
- ISBN-13 : 978-1491906842
- Paperback : 362 pages
- Product Dimensions : 7.01 x 0.75 x 9.17 inches
- Publisher : O'Reilly Media; 2nd Edition (October 28, 2014)
- Language: : English

I Will share this book on our WeChat group

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Programmers are needed to create, code, and launch applications for everything from business, to communication, to education and games.

In this course we will help you expand upon programming knowledge to build your own applications from start to finish.

Through accelerated and immersive programs, students focus on the demands of the industry while utilizing today's development tools and technology.

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App Inventor

Mobile application development and APP

- The course will give students hands-on experience in developing interesting Android applications.

- No previous experience in programming is needed, and the course is suitable for students with any level of computing experience.

- MIT App Inventor will be used in the course. It is a blocks-based programming tool that allows everyone, even novices, to start programming and build fully functional apps for Android devices.

- Students are encouraged to use their own Android devices for hands-on testing and exploitation.

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App Inventor

What the APP Inventor Creatrer claim

- Learn to use the open development tool, App Inventor, to program on Android devices. You will learn how to design and build mobile apps -- apps that are aware of their location, send and receive text messages, and give advice and directions.

- The only limit on the types of apps you will learn to build is your own imagination! However, computer science is not just about coding and building apps.

  – We will also learn some of the fundamental principles of computer science. We'll learn about the potential and the limitations of computing and coding.

  – We'll learn how the Internet works and about the positive and negative aspects of computing in today's society, and much more! For these broader computing concepts we will work within an emerging curricular framework -- the Computer Science Principles (CSP).

What the APP Inventor Creatrer claim

- The CSP framework is being developed by leading computer science educators from around the country under the auspices of the College Board and with funding support of the National Science Foundation.

- In addition to programming and CSP the course is project-based and emphasizes writing, communication, and creativity.

- Multiple-choice questions, in the style that students can expect to encounter on the AP exam, will also be a key component of this course.

- What you'll learn How to design and create Android mobile apps using App Inventor How computer science principles apply to algorithms, programming, the Internet and society How to think creatively, analytically and abstractly about computational problems

App Inventor

In this course

- In this course, we will use a program called MIT AppInventor to create Android applications.

- MIT App Inventor is an innovative beginner's introduction to programming Android applications. So, programming is normally done with lines of text which we call then source code.

- It used to take hundreds or thousands of lines of source code to produce a program with interesting interface

- . Using App Inventor, the source code are molded in what we call puzzle blocks. The blocks needs to be fit in specific ways so it's difficult to make mistakes. Imagine that you're using source code. It can be quite frustrating if you need to figure out your mistakes from millions of lines of source code.

- But now with App Inventor, you can easily create Android applications using puzzle blocks.

- MIT App inventor is currently in version 2 beta. It can be started and used it within a browser. That means, it's going to work onany OS including Microsoft Windows, macOS X and also Linux.

- But also means that you need stable Internet connection to work on your projects. Supported browsers include Google Chrome,Firefox and Apple Safari. Finally, if in doubt, try it out because I'm sure that you enjoy while you're developing all the different Android applications in the course

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App Inventor

Syllabus
What you will learn from this course

Introduction of MIT App Inventor	Unit 1 Introduction to App Inventor	**More Programming Basics**	Unit 4 Intro Variables, Loops and Other Techniques
	Hello World App		Loop
	Adding Component & Button Component		Comments
	Component Property		Duplicate Blocks
			Backpack
	Label Component		Collapse Code Blocks
Application Coding	Unit 2 Intro Code Blocks Features		Variable
	Android Emulator		While Loop
	Create APK		Starting Using loop Project
	Introduction to Code Blocks		Code Comment
	Event Handler		Code Duplication
	Code Deletion		Collapsing Code Blocks
	Method Call	**Alarm Clock Application**	Unit 5 Intro Timepicker, Sound and Clock
	Property Getter and Setter		TimePicker
	Built-In Text Code Block		Audio Alarm
	Application Testing		Starting AlarmClock Project
	Using Emulator		TimePicker Component
	Testing HelloWorld Project		Project Asset
	Project Sharing		Sound Component
Programming Basics & Dialog	Unit 3 Intro Maths, Notifier, Boolean and Logics		Clock Component
	Numbers		Alarm Clock Coding
	Notifier	**Audio & Video**	Unit 6 Intro Sound, Audio and Video
	Boolean Values		Music Alarm
	Logical Operators		Radio Alarm
	Math Code Blocks		Video Alarm
	Evaluation Order		Audio
	Mutator		Video
	Formatting Number		Media Source Specification
	Notifier Component & Starting UsingMath Project		Player Component
	Choice Dialog & Starting UsingIfThen Project		Starting MusicAlarmClock Project
	Boolean Value & Canceling Dialog		Starting RadioAlarmClock Project
	if-then Code & Logic Code Blocks		VideoPlayer Component
	else-if socket		Starting VideoAlarmClock Project

App Inventor

Syllabus
What you will learn from this course

Drawing Application	**Unit 7 Intro Components for a Drawing App**
	Spinner
	Slider
	Text Box
	Drawing Canvas
	Spinner Component
	Slider Component
	TextBox Component
	Canvas Component
	Component Layout
	Starting DrawingApp Project
	Handling Slider's Selection
	Canvas touching & Color code block
	Canvas Drawing

File	**Unit 8 Intro File Component and Notebook App**
	Notebook Project
	File and Its Formats
	File Component & App Inventor Storage Structure
	Notebook Project

Game	**Unit 9 Intro Making an Interactive Game**
	Random Numbers
	Random Real Numbers
	Accelerometer and Shaking
	Dolphin Game
	ImageSprite Component
	Random Number
	Device Shaking and Vibration
	Starting Superdolphin Project & Game Assets
	Application Interface
	Using Clock, Sound and File Components
	Game Score & Game Start
	Random Dolphin Appearance
	Touching Dolphin
	Stopping Game

Device Location	**Unit 10 Intro Location Component and Lost & Found Project**
	Device Location
	Lost and Found
	Location Information
	LocationSensor Component
	Starting LostFound Project
	Application Location Input

Web Browsing	**Unit 11 Intro Web Viewer and Lost & Found Project**
	Web Viewer
	WebViewer Component
	Google Maps
	Finishing LostFound Project

Final Exam

THIS PART MAY BE ADD

How to enjoy this Course

100

5. read my lecture note

4.ask your question during the course

3. study the ppt and Video on MOOC system

2.send all home work and try to solve/ Learn

1. attend all lecture and write your own note

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App Inventor

Reference

- https://www.quytech.com/blog/top-11-key-features-of-a-successful-mobile-app-development/
- http://www.appinventor.org/

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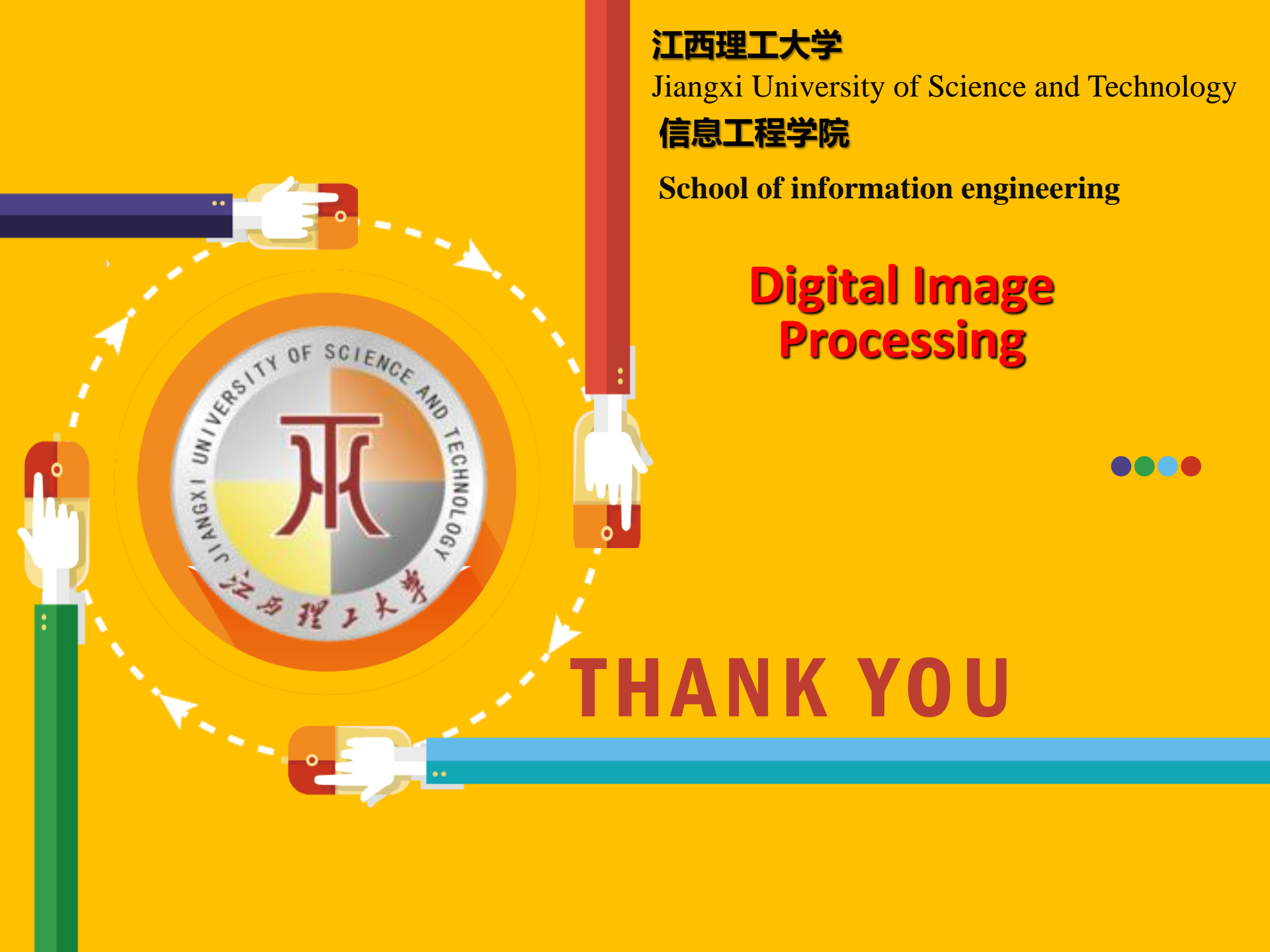Jiangxi University of Science and Technology
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Digital Image Processing

THANK YOU

"The beauty of research is that you never know where it's going to lead."

RICHARD ROBERTS
Nobel Prize in Physiology or Medicine 1993

"BE HUMBLE. BE HUNGRY. AND ALWAYS BE THE HARDEST WORKER IN THE ROOM."