

ITU-TRCSL Training on ICTs for promoting Innovation & Entrepreneurship

Leveraging Open Source & Free Online Services

**12-15 September, 2017
Colombo, Sri Lanka**

Pete Argent , ITU Expert



Hello World!

We love technology and empowering people with the skills to create a better future for themselves and their community.



About us

Pete Argent - Former IBM consultant, taught coding and entrepreneurship for 5 years

Marshall Gray - Passionate Teacher and Managing Director at Dem Novel Tees

Agenda

1. Future technologies
2. Coding basics
3. Build a web application





Welcome to the future

Every industry is being revolutionised with technology.
Understanding how technology works empowers you to think bigger and come up with real innovative solutions.



Terminology

- ❑ What is the difference between web site, web app, app?
- ❑ APIs
- ❑ Modern programming frameworks
- ❑ Cloud infrastructure
- ❑ SaaS/PaaS business model



New technologies

- ☐ What is Artificial Intelligence?
- ☐ IoT?
- ☐ Blockchain?
- ☐ UAV?
- ☐ AlaaS?

Future Tech Services

❑ [API.ai](#)

❑ [Google Cloud Vision](#)

❑ [H2O.ai](#)

❑ [thinger.io](#)

❑ [BigChainDB](#)

❑ [OpenChain](#)

❑ [Multichain](#)

❑ [Ethereum](#)

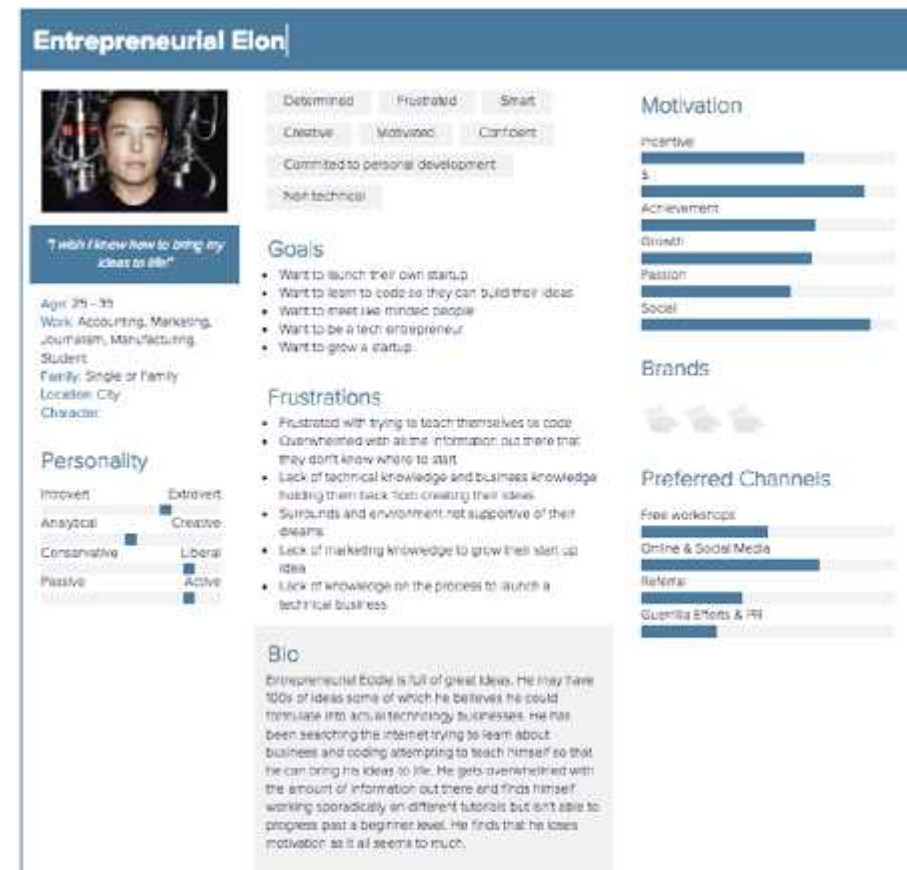


Growth of startup methodologies

Lean startup tools:

- ☐ MVP
- ☐ Business Model Canvas
- ☐ User Experience Design
- ☐ Personas

eg. Xtensio templates, Agile development



Design Thinking



What is design?

A process of thought and planning.

Start with the problem that needs to be solved.

A close-up, slightly blurred photograph of a person's hands typing on a laptop keyboard. The laptop screen displays lines of code in a dark-themed editor. In the background, a black mug with a white crown and the words 'KEEP CALM' is visible. The overall scene suggests a focused coding environment.

Let's code!

What is programming?

- ❑ Instructions
- ❑ Algorithms
- ❑ Data manipulation
- ❑ Input / output



Coding fundamentals

1. Syntax (the words & symbols used to communicate with the computer)
2. Data types (string, integer, date, array)
3. Variables (placeholder for data)
4. Operators (greater than, less than, equal to)
5. Flow control (if, else, loops)



Web application development framework

- designed to support the development of web applications including web services, web resources, and web APIs
- automate the overhead associated with common activities performed in web development.



Ruby on Rails

- Open source
- Based on the Ruby language
- Created in 2004 by David Heinemeier-Hanson
- Used by AirBNB, Shopify, SoundCloud and many more



Benefits

- Quickly build MVP
- Does a lot of code for you
- Easy for beginners to learn
- Thousands of open source gems to add functionality to your application quickly



Development Environment

Tools (software) that a developer uses to create software.

- ☐ Terminal
- ☐ Code (advanced text) editor
- ☐ Browser





Cloud 9

<https://c9.io>

Cloud based development
environment.

Sign in:

student@digitalintelligence.institute

Password: ilovecoding





Clone the Cake Shop app

The screenshot shows the Digital Intelligence workspace interface. On the left is a blue sidebar with the 'Intelligent Student' header and a list of options: 'Workspaces' (selected), 'Shared With Me', and 'Repositories'. Below this are sections for 'YOUR ILKY SUBSCRIPTIONS' with a 'Digital Intelligence' subscription and 'YOUR KUMONIA SUBSCRIPTIONS' with a 'Free' subscription. The main area is titled 'Workspaces' and contains a large grey box with a plus sign and the text 'Create a new workspace'. To the right is a workspace card for 'coderfactoryrebooted...' titled 'Cake shop app', which was cloned from 'Digital-Intelligence-Institute/0' and updated 10 minutes ago. It has 'Clone' and 'Open' buttons and lists resources: '1 CPU', '512MB RAM', and '2GB HDD'. The top right of the interface has a search bar labeled 'Filter...' and a magnifying glass icon.



Create a new workspace

Workspace name

cake-shop-1-pete

Description

Pete's Cake shop app

Team

Digital Intelligence

Hosted workspace

[Clone workspace](#)

Remote SSH workspace

Salesforce

Clone from an existing workspace

Cloud9 will create an exact copy of your workspace. This includes tab-states, project settings and visibility settings.

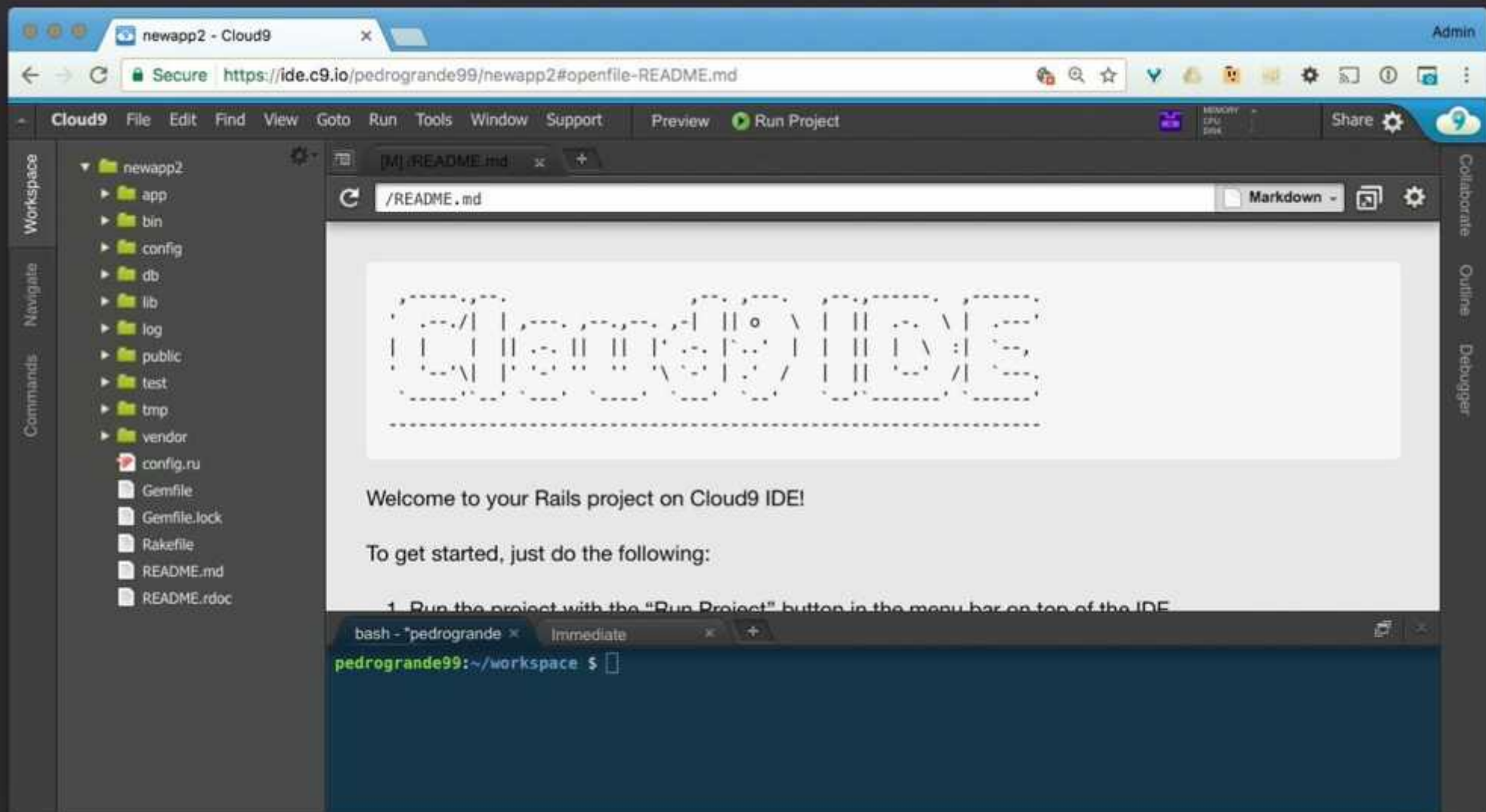
Clone workspace:

intelligentstudent/cake-shop-1



You are currently cloning workspaces from your team Digital Intelligence. To clone your own workspaces, unset the value above

Create workspace





I Thank U (ITU)

