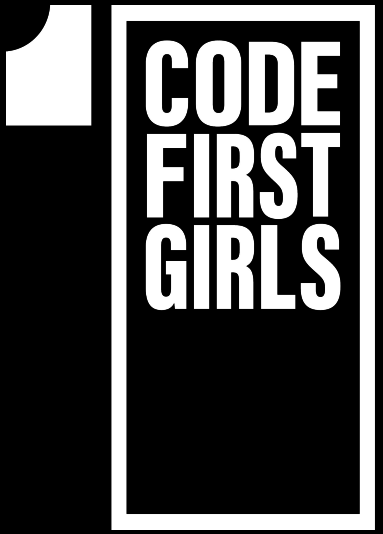
WELCOME TO OUR FINAL SESSION

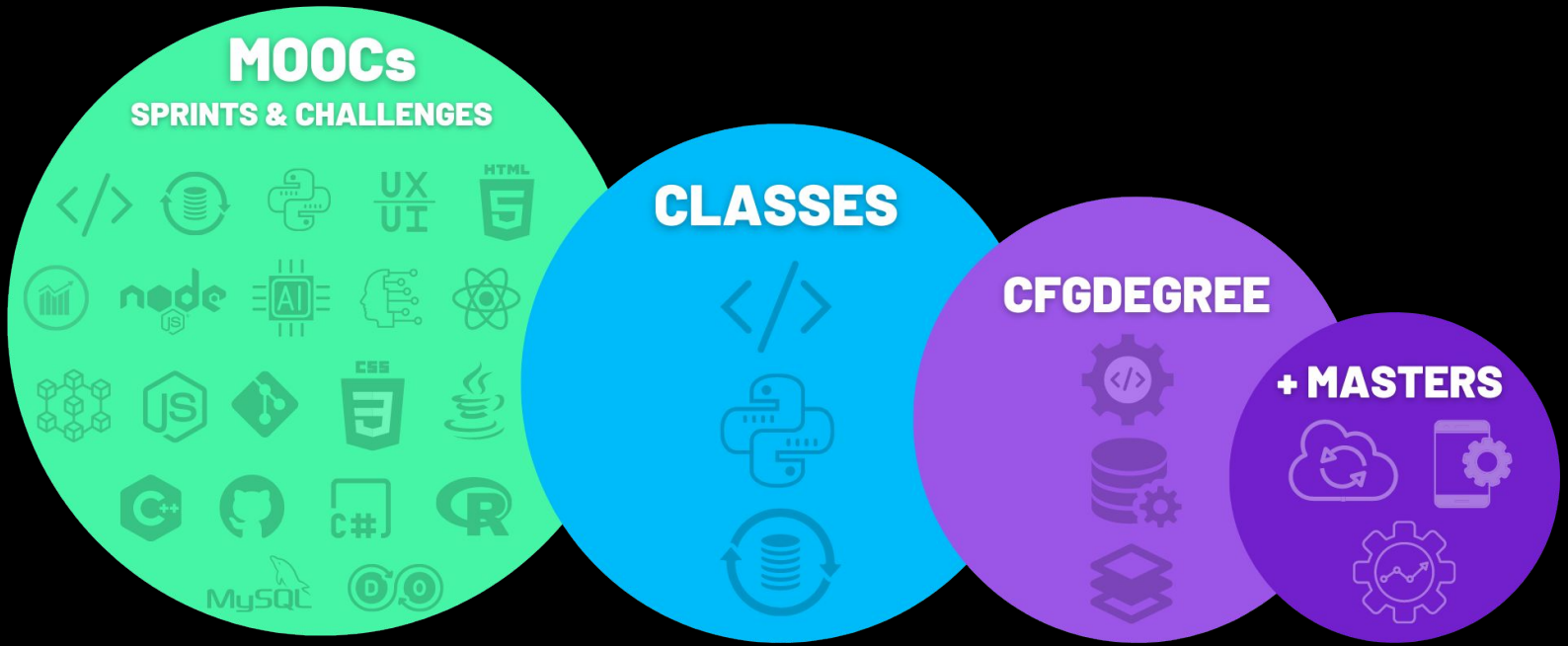


Intro to Web Development course

Agenda	
6:30 - 7:30	Project Prep time
7:30 - 8:15	Project presentations and Feedback
8:15 - 8:30	What's next? The CFG Pipeline

SO WHAT'S NEXT?
CODE FIRST GIRLS

THE CFG OPPORTUNITIES



SUCCESS STORY

“I have recently been offered another position which includes paid training and the chance to work as a consultant. I can honestly say I wouldn't be in this lucky position if I hadn't had the opportunities to study with CFG already. This has been a huge boost to my confidence and made me realise that I am still a coder. I cannot thank CFG enough for the experiences I have had, in particular winning the Python app project last year! It gave me a tech project to discuss for my final interview presentation.”

FULL DETAILS IN THE FOLLOWING SLIDES

GIVING WOMEN THE UNFAIR ADVANTAGE

MOOCs

ABOUT

MOOC SPRINTS

MOOC CHALLENGES

CFG's massive open online courses are designed in short segments to impart technical skills, confidence, career discovery or real-world problem solving. They are delivered through YouTube Live to facilitate maximum social interaction and reach.

WHAT WE DO:

+ MOOC Sprints made up of 1-hour sessions, once a week, for 4 weeks
+ MOOC Challenges made up of two 1-hour sessions
+ No cap on attendees
+ Fee of charge
+ Live interactive instruction
+ Accessible to all
+ Branded certification (for 4 x live session sprint completion)

EXPANDING OUR PRODUCT CURRICULUM

MOOC SPRINT

CORE CONCEPTS

Best for: those starting out or wanting to learn the basics across our core concepts that lead directly into our 8-week class topics.

- Intro to Coding
- Intro to Python
- Intro to Data
- Intro to Web Dev
- Intro to JavaScript
- Among many more...

Linked MOOC Challenge

MOOC SPRINT

CAREER BOOSTER

Best for: those who are applying for roles in tech.

- CV & Profile Building
- Interview Prep & Confidence
- Tech Assessments & Testing
- Building your personal brand

No linked MOOC Challenge

MOOC SPRINT

TECH TOPICS

Best for: all levels and experience. From beginners to our CFGdegree grads (and alumni!) Learn a new skill or freshen up on existing knowledge.

- Approx 15 topics across tech
- Voted for by our community & clients
- Scheduled across the year

Linked MOOC Challenge

CLASSES

MORE CLASSES

+ 8-week closed classrooms
+ Available for university grads, career switchers / professionals, school leavers
+ Branded certification (after attending 6/8 + submitted project)
+ Additional certificate for winning project!

NEW

JAVASCRIPT

01 JavaScript basics
02 Conditions & logics
03 The DOM
04 Intro to ReactJS
05 React components
06 States & events
07 Styling React components
08 Project presentations & feedback

DATA & SQL

01 Intro to databases
02 Basic SQL syntax
03 Working with data
04 Joins and Unions
05 Expressions & Functions
06 Views, Transactions & Procedures
07 Database design & project
08 Project presentations & feedback

PYTHON & APPS

01 Python basics
02 Problem-solving
03 Decision-making in your program
04 Third-party libraries & API's
05 Project work
06 Build & deploy your app 1
07 Build & deploy your app 2
08 Project presentations & feedback

WEB DEVELOPMENT

01 HTML basics
02 CSS basics
03 Project Design
04 Intro to Bootstrap
05 Intro to JavaScript
06 UX/UI & accessibility
07 Github & Project work
08 Project presentations & feedback

CFGDEGREE

ABOUT THE CFGDEGREE

Completing a Kickstarter class is the first step. You are now eligible to apply for CFGdegrees which are open by application and interview to high potential candidates who want to pursue a career pathway in data, software, full-stack and new for 2023, Product Management. Candidates must have a class certification, have passed an entry assessment and demonstrate a commitment to working with one of our partner companies.

WHAT WE DO:

+ Screening, application criteria and interview
+ 14 week programme & assessment
+ 7 weeks foundation
+ 6 weeks specialisation (+1 reading week)
+ Interview prep and coaching
+ Can be targeted by geography
+ Branded certification

CFGDEGREE // FOUNDATION

7-week foundation II Applicants are screened, tested, and interviewed by CFG

WEEK 1-2

+PYTHON

BASIC PROGRAMMING PRINCIPLES

01 Data types and variables
02 Functions and problem solving
03 Standard libraries
04 Decision making and IF logic
05 Python data structures
06 Introduction to testing
07 Reading and writing files
08 Python APIs

WEEK 3-4

+SQL

FOUNDATIONS OF DATA MANAGEMENT

01 Database creation and SQl syntax
02 Queries, logic operators & constraints
03 Relational DB, primary & secondary keys
04 Filtering and aggregation data
05 Complex structures: joins & union
06 Stored procedures & user defined functions
07 Functions & transaction management
08 Views, locks, DB backup

WEEK 5-7

BUILDING END TO END SYSTEMS

01 Version control
02 Exception handling and debugging
03 Program flow management
04 Python: build API & micro services
05 Integration: Python, DB & APIs
06 Regex and Functional Programming
07 Tableau vs Power BI for data visualisation, introduction to Jira
08 Code practise, assessment and knowledge check

CFGDEGREE // SOFTWARE

7-week specialisation + 1 x reading week II All candidates also receive interview prep and coaching

Practical workshops to solve programming problems and apply techniques, course projects, and assessments.

WEEK 9-10

PYTHON MODULES & LIBRARIES

01 Object Oriented Programming
02 Programming arrays & hash tables
03 Itertools and Collections
04 Python data structures, stack & queues

WEEK 11-12

COMPLEX DATA STRUCTURES

01 Programming arrays & hash tables
02 Recursion Programming
03 Linked Lists
04 Graphs

WEEK 13-14

ALGORITHM DESIGN

01 Time-space complexity
02 Programming algorithms
03 Search and sorting algorithms
04 Famous algorithms

CFGDEGREE // DATA

7-week specialisation + 1 x reading week II All candidates also receive interview prep and coaching

Practical workshops to solve programming problems and apply techniques, course projects, and assessments.

WEEK 9-10

ANALYTICAL LIBRARIES AND PACKAGES

01 Pandas (+Jupyter) and data frame
02 Pandas visualisation and analysis
03 NumPy library for scientific analysis
04 Matplotlib library

WEEK 11-12

SCIENTIFIC DATA PROCESSING

01 Machine learning with Python
02 SciKit learn for machine learning
03 Data cleaning and transformation
04 Statistical concepts: data analysis

WEEK 13-14

DATA MODELLING AND EVALUATION

01 Programming algorithms
02 Explanatory analysis
03 Predictive modelling
04 Model evaluation

CFGDEGREE // FULL-STACK

7-week specialisation + 1 x reading week II All candidates also receive interview prep and coaching

Practical workshops to solve programming problems and apply techniques, course projects, and assessments.

WEEK 9-10

DEEP DIVE INTO WEB DEV & REACT

01 Overview of Web Dev & HTML
02 Styling with CSS (incl. Bootstrap)
03 Behaviour using JavaScript
04 Introduction to React & components
05 Component styling & design patterns
06 Introduction to State and mutations
07 UX/UI Design
08 Interface planning via wireframing and blueprint design

WEEK 11-12

NAVIGATION, BEHAVIOUR AND TYPESCRIPT

01 Adding behavior to components
02 Navigating with Router
03 Router props and further coverage
04 Lifecycle methods
05 React Hooks
06 Tying it all together
07 Introduction to Typescript
08 Types, Union Types and further TypeScript coverage

WEEK 13-14

FULL-STACK INTEGRATION

01 Version control
02 Assessment and knowledge check
03 Exception handling and debugging
04 Coverage of Angular and relations to it
05 Mocking back end infrastructure and practicing full-stack development
06 Integration: connecting to front-end
07 Overview of Linux and command line
08 Assessment and knowledge check

CFGDEGREE // PRODUCT MANAGEMENT

NEW

7-week specialisation + 1 x reading week II All candidates also receive interview prep and coaching

Practical workshops to solve programming problems and apply techniques, course projects, and assessments.

WEEK 9-10

KEY CONCEPTS OF THE PRODUCT MGT PROCESS

01 Product vision & product life cycles
02 Product mapping & roadmaps
03 Market research
04 Data analysis & financials
05 Tools (Jira, Confluence, Kanban etc.)
06 Feature prioritisation & release management
07 Backlog management
08 Business case preparations & presentation skills

WEEK 11-12

PRINCIPLES OF DESIGN & HANDOVER TO DEVELOPERS

01 User research & discovery
02 Accessible design and tools (e.g. Figma)
03 User journey mapping
04 User experience (UX) & wireframing
05 User interface (UI) typography, colour
06 User interface (UI) high fidelity design
07 Prototyping and user testing
08 Developer briefing & case scenarios

WEEK 13-14

TESTING, QA & STAKEHOLDER MANAGEMENT

01 Sprints and sprint management
02 Agile methodologies and concepts
03 Role of a SCRUM master
04 QA planning & test environment set-up
05 Global App Testing (GAT)
06 Bug tracking and documentation
07 Problem-solving & troubleshooting
08 Stakeholder management

+MASTERS

ABOUT +MASTERS

+Masters are open by application and interview to candidates who wish to continue their learning and extend their career pathways into either DevOps & Cloud, Cyber Security, Mobile App Development, Data Analyst or AI/ML . Candidates must have a CFGdegree certification (or equivalent level) or have been in a relevant tech role.

WHAT WE DO:

+ Screening, application criteria and interview
+ 4 week programme & assessment
+ Extension to CFGdegree
+ Flexible start at end of CFGdegree or with a later cohort
+ Can be targeted by geography
+ Branded certification

+MASTERS // DEVOPS & CLOUD

Related roles to this area: DevOps Engineer, Site Reliability Engineer, Cloud Engineer, Software Engineer

WEEK 1

WORKING WITH CLOUD PLATFORMS

01 History of cloud computing
02 and its advantages
03 Intro to AWS, Azure and Google Cloud and key fundamentals
04 Architectural design principles
Security and compliance

WEEK 2

USING DOCKER

01 Overview of Docker and its importance for industry
02 Creating and using containers
03 Container commands and isolation
04 AWS Container Service

WEEK 3

INTRO TO KUBERNETES & PIPELINES

01 Kubernetes history and need
02 Managing multiple containers
03 Overview of CI & CD pipelines
04 Types of deployments

WEEK 4

TYING IT ALL TOGETHER

01 Using Docker on AWS
02 Managing a cluster
03 Overview of Terraform
04 Security considerations

+MASTERS // DATA ANALYST NEW

Related roles to this area: Business Analyst, Data Business Analyst, Quantitative Analyst

WEEK 1

DATA SOURCES & PROCESSING

01 Collecting & processing data, defining quality data criteria
02 Data sources and mapping, establish data processes
03 Data cleaning and mining
04 Data bias

WEEK 2

DATA ANALYTICS

01 Data analytics with Advanced Excel
02 Development with Advanced Excel
03 Tableau visualisation and reporting
04 Practical analytics: case studies & data modelling

WEEK 3

DATA INSIGHTS

01 Statistical analysis techniques & inferential probability
02 Developing BI tools & insights, dashboard design
03 Creating reports & knowing your audience
04 Stakeholder management, presenting business solutions

WEEK 4

ADDING VALUE

01 Process automation
02 Data visualisation
03 Data ethics
04 BA feature enhancement

+MASTERS // MOBILE APP DEVELOPMENT

Related roles to this area: DevOps Engineer, Site Reliability Engineer, Cloud Engineer, Software Engineer

WEEK 1

OVERVIEW OF THEORETICAL CONCEPTS

01 Intro to React components
02 Styling and design patterns
03 Effective approaches for clean code
04 Differences between React and mobile-specific React Native

WEEK 2

DESIGN PRINCIPLES VIA HCI

01 Intro to HCI and its importance (Norman Doors)
02 Responsive Design
03 Norman's Heuristics
04 Applying design knowledge to mobile devices

WEEK 3

STATE MANAGEMENT & LIFECYCLE METHODS

01 Introduction to State management
02 Manipulating the State
03 Introduction to lifecycle methods
04 Adding behaviour to components

WEEK 4

NAVIGATION, REDUX & HOOKS

01 Component functions vs Classes and Navigation
02 Usage of Hooks and relation to lifecycle methods
03 Introduction to Redux
04 Overview of alternatives (Ionic, Angular)

+MASTERS // CYBER SECURITY NEW

Related roles to this area: Cyber Security Analyst, Cyber Security Engineer, Security Consultant, Ethical Hacker

WEEK 1

CYBER ANALYSIS

01 History of attacks
02 Network security
03 Web application vulnerabilities & malware attacks
04 Common network & host security

WEEK 2

CYBER DENIAL

01 Software development
02 vulnerabilities
03 Protocol analysis
04 Software reverse engineering Ethical hacking techniques and practice

WEEK 3

CYBER ACCESS

01 Encryption techniques
02 Physical & environmental security
03 Penetration testing
04 Debugging/static/dynamic analysis

WEEK 4

CYBER INFRASTRUCTURE

01 Encryption techniques
02 Physical & environmental security
03 Penetration testing
04 Debugging/static/dynamic analysis

+MASTERS // AI & MACHINE LEARNING NEW

Related roles to this area: AI Engineer, ML Engineer, AI Designer, Big Data Engineer

WEEK 1

AI & ML FOUNDATIONS

01 AI & ML overview, ethics
02 Statistics, core data science concepts and models
03 Validation, testing, and optimisation
04 Bias and variance

WEEK 2

AI IMPLEMENTATION

01 Classifications
02 PyTorch & custom datasets
03 Neural networks
04 Practical items: debugging, data augmentation, pre-trained models

WEEK 3

APPLICATION

01 Architecture, augmentation, debugging
02 Pre-trained models & transfer learning
03 Churn modelling, filtering, leads scoring
04 Deploying Fast APIs

WEEK 4

ADVANCED AI/ML

01 Advanced AI techniques & deep learning
02 Errors and failure
03 Kubernetes & Kuberflow
04 Apache Airflow & application