



What Your Students Will Learn

Foundation of Software and Engineering

This foundational knowledge of how computers and programming languages work will allow your students to optimize and debug anything later on in their professional career. Students will also begin working with algorithms and data structures which are essential foundations for great Software Engineers - the type that the best companies hire.

In the first sprint of foundations, Students will work in C and Unix programming, graphical programming, data structures, assembly language, and algorithms as well as reverse engineering and security protocols.

From there, they are introduced to higher-level languages, increasingly advanced algorithms, space and time complexity, database management, and front-end programming. Using the latest technologies, they will begin to create a complete web application project that will span the rest of the foundation sprints.

The final sprint of foundations emphasizes automation, scalability, and reliability, so that students are familiar with the infrastructure and best practices similar to those in tech powerhouses. Alongside a continuation in web development, they will also advance in algorithmic understanding, technical writing, debugging, and project management.

Examples of Projects



- Write printf function
- Web stack debugging
- Clone a marketplace
- Code a shell



Foundation of Computer Science & Software Engineering

1st Sprint



- Git and command line editors
- Introduction to Bash
- C first statements
- C pointers
- C recursion
- C static library
- C memory allocation
- C preprocessor
- C variadic functions
- C bit manipulation
- C file I/O
- Singly linked lists
- Create your own printf
- Create your own basic Shell

_ 3rd Sprint



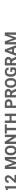
- Python Object-relational mapping
- Python Web framework
- Python RESTful API
- Python web scraping
- Javascript first statements
- Javascript objects
- Javascript scopes and closures
- Javascript web scraping
- Search algorithms
- SSH
- SSL certificate
- Web server
- Load balancer
- Firewall
- MySQL primary-replica
- Server monitoring
- Code deployment
- Postmortem
- Webstak debugging
- Portfolio project

2nd Sprint

- Python first statements
- Python import and



- Python data structures
- Python exceptions
- Python classes
- Python inheritance
- Python file I/O
- Python JSON
- serialization/deserialization
 HTML/CSS introduction
- TITIVIL/ 000 ITITIOGUCE
- SQL basic queries
- SQL join queries
- C dynamic libraries
- C makefiles
- Doubly linked lists
- Stack and Queues
- Hash tables
- Sorting algorithms
- Binary trees
- Bash scripting
- Unix processes and signals
- Regex
- Network introduction





Specialization in Front-End Web Development

Make Amazing Web Experiences

Front-end web development defines how we use our computers every day. The work of front-end developers is what helps technology be usable to the average person, and companies with the best, most stable, and most usable sites are the most popular on the web.

This is the perfect program for people willing to make the web more usable, more accessible, and more fun to use.

After the first three sprints of this program students will focus on the skills that make successful front-end web developers. Students will study and master technologies like HTML, CSS, JavaScript, and developer tools and apply these technologies with React, one of the most popular front-end frameworks.

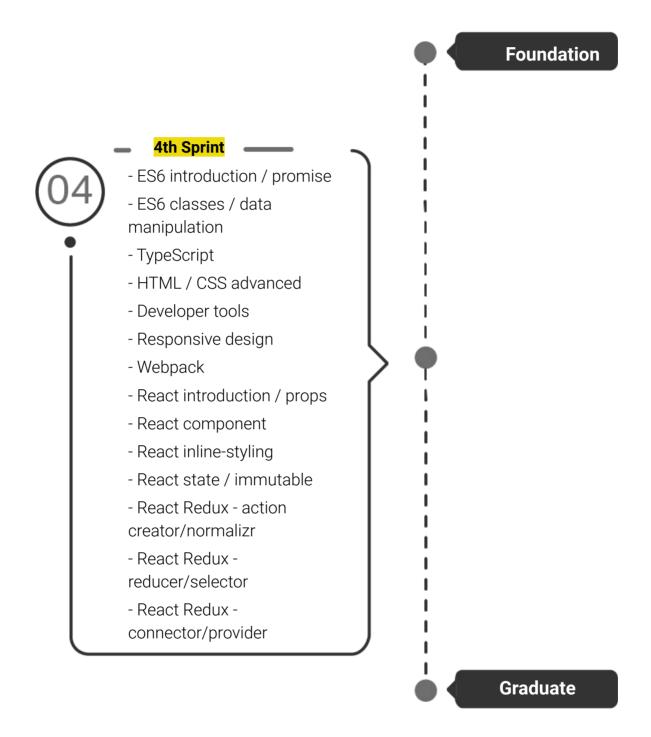
Examples of Projects



- Desktop and mobile version of a product website
- Student dashboard in React
- Countries portal with React and GraphQL
- CRM dashboard in React



Curriculum Front-end Web Development



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Our projects-based programs are designed with your success in mind.

Along with Front-end Web Development, we offer emerging technology Specialization programs:

- Augmented Reality & Virtual Reality,
- Full-stack Web Development,
- Machine Learning,
- DevOps,
- Low Level and Algorithms,
- Back-end Development,
- And many more, depending on your needs.

All programs can be customized based on your needs; you specify the length, the pace, and the pedagogical goals. <u>Let's get started</u>

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