

# EMILY CHARLES

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## PROFESSIONAL EXPERIENCE

INTERACTIVE DEVELOPER, BOSTON PRODUCTIONS, INC.  
September 2015 – present, Norwood MA

- Design, develop, and modify software within performance and financial constraints. Work in multiple platforms to create interactive exhibits that are responsive, efficient, and visually engaging.
- Modify existing software to correct errors, improve performance and add features as necessary. Troubleshoot and upgrade legacy code base to maintain performance standards.
- Create and lead technical support department to field reports from all deployed software installations. Pilot features such as help desk technology, bug tracking, and client-specific web portals to streamline reporting and simplify the client experience.
- Dynamically create and assemble media in interactive programs. Process media and ensure that encoding parameters allow for playback on all major operating systems and web browsers.

OPERATIONS COORDINATOR, TECHNOFROLICS  
March 2012 – September 2015, Somerville MA

- Software design and development at a high-tech creative studio. Implemented code to handle networking, data parsing, data visualization and hardware control on Windows, Raspberry Pi, and Arduino platforms.
- Used multiple scripting languages to configure exhibit behavior per client requests. Assisted clients in concept design, development, and production by applying expert knowledge of TechnoFrolics' proprietary software.
- Primary technical support contact for 100+ exhibits worldwide. Provided documentation and training to on-site technicians.
- Created video productions using compression algorithms, file compatibility, and graphic design principles to maintain production quality and portability.

ADMINISTRATIVE ASSISTANT, KAPLAN INC.  
September 2011 – March 2012, Boston MA

- Designed, implemented, and maintained a data-tracking system to organize student records using Microsoft Excel and Visual Basic for Applications. Integrated data tracking with pre-existing protocols to eliminate disruption in the user experience.

## SKILLS

### PROGRAMMING LANGUAGES

Python, ActionScript 3.0, Java, Arduino C, Windows batch scripting, some Processing

### TECHNICAL SOFTWARE

Atlassian (JIRA, Confluence, SourceTree), git, FFMPEG, Tableau Analytics, Flash Professional, Adobe creative suite

### PLATFORMS

Windows, Raspberry Pi, Arduino, some Linux

### PROFESSIONAL

Agile/Scrum, on-the-job learning, creative problem solving, adaptability

## EDUCATION

### UNIVERSITY OF CALIFORNIA, LOS ANGELES

Bachelor of Arts, Linguistics, Magna cum Laude, 2009

### INDEPENDENT COURSEWORK

HTML, CSS, and Javascript for Web Developers, Winter 2017

Paradigms of Computer Programming – Abstraction and Concurrency, Winter 2016

Paradigms of Computer Programming – Fundamentals, Winter 2016

Introduction to the Internet of Things and Embedded Systems, Summer 2015

Introduction to Interactive Programming in Python, Spring 2013

Human-Computer Interaction, Spring 2013

Mobile Application Programming in Java, Fall 2013

## INTERNSHIPS

- *Discovery Center Intern - The Museum of Science, Boston, Summer 2010*  
Developed, prototyped, and tested new exhibit components
- *Language Lab Intern – UCLA Linguistics Department, Spring 2008*  
Tracked and coded heart rate data to explore language differentiation in infants.

## VOLUNTEER WORK

- *Coursera: Community teaching assistant for Introduction to Interactive Programming in Python, 2 terms*
- *Arnold Arboretum: Activity Guide and Interpreter, 2 years*
- *The Discovery Center Mobile Programs: Activity Guide and Interpreter, 6 months*

## INTERESTS

Arduino, maker projects, augmented reality, judo, parkour