Alex Patin

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LANGUAGES

Python • C • C++ • C# • Java
R • Html/CSS • Js • Obj-C

SOFTWARE TOOLS

AWS • Azure • Git • Apache
Spark • ElasticSearch
TensorFlow • Scikit-learn
OpenCV • SQL/NoSQL
Python/JS web-frameworks

EXPERTISE

PaaS • Signal Processing
Machine Learning • Blockchain
Natural Language Processing
Control Systems • Circuit Design
Image Processing • Embedded
Systems • Web/Mobile Dev

SOFT SKILLS

Agile Methodology • Scrum Tools
(JIRA, Axosoft) • Slack • Grant
Writing • Lean Startups
Business Model Creation

RELEVANT COURSES

Data Structures & Algorithms
Artificial Intelligence • Computer
Vision • Systems Programming
Discrete Math • Programming
Lanuage Concepts • Computer
Org & Design

OTHER STUFF

Music (Clarinet, Guitar,
Production) • Club Tennis
Hackathons • Barista-ing
Dorm-room Horticulture

EDUCATION

Penn State University Class of 2018: *B.S. Computer Science*   Major GPA: (3.72/4.00)

PROFESSIONAL EXPERIENCE

Musical Minds: *Founder, CEO*   Nov 2015 - Now

- Directed 20 employees in the creation of a music-for-wellness recommendation engine powered by proprietary brainwave-sensing headphones
- Developed a Python REST API using AWS ElasticBeanstalk, AWS Cognito, Sanic, DynamoDB, and Apache Spark for collaborative filtering-based music recommendations
- Designed EEG biopotential amplifiers using Multisim and developed a DWT/SVM mental state classifier using C++/Tensorflow embedded on a TI-CC430 MCU
- Garnered $21,000 in non-equity financing through several grants, competitions, and awards

Microsoft: *Student Partner to Penn State*   Aug 2015 - Now

- Organized 13 tech workshops on MS developer tools for college students
- Mastered tools including Azure, MS Cognitive Services, Windows IoT toolkits, etc
- Volunteered at public schools through "Hour of Code" to teach young students how to code

Optum: *Software Development Intern*   May - Aug 2017

- Developed a natural language understanding API and integrated it with complex internal business tools to simplify navigation using Flask, RASA, SPARQL, and ElasticSearch
- Built an AngularJS UI for centralization of UnitedHealth patient information between doctors
- Collaborated on Amazon Alexa skills to enhance assisted living and memory care units

Progeny Systems: *Software Development Intern*   May - Aug 2015

- Created Selenium web-scrapers in Python to collect Facebook images for CNN training
- Deployed concurrent scraper images to AWS EC2 instances to acquire 3,000,000+ images
- Designed Java GUI to show facial similarities, visualized using t-SNE

PROJECTS AND CONSULTING

Charity Labs: *Product Development Consultant*   Jun 2017 - Now

- Built web app for online, charity-specific, 50/50 auctions using Django, Stripe, and Heroku
- Raised over $25,000 for the Against Malaria Foundation during beta tests

Lunar Lion: *Guidance, Navigation, and Controls Lead Engineer*   Apr 2015 - Jan 2016

- Directed 35 students in the development of five software/hardware subsystems including flight software, ground controls, modelling and controls, systems testing, and visual guidance
- Interfaced the craft's health monitoring, navigational, and communication sensors with C/C++/Python software using Arduino and RTD microcontrollers
- Prototyped an Arduino and C#/WPF Ground Control Station for command transmissions
- Implemented a monocular, spline interpolation algorithm leveraging parallax motion of lunar surface features for surface reconstruction and landing sequence adjustment using OpenCV

AWARDS AND ACHIEVEMENTS

Slavin Family Foundation Fellow	July 2016 - Now
WPSU's 'The Investment' Finalist	April 2017
Launchbox Cohort Graduate	Dec 2016
Inc. U Video Pitch Competition Winner ($2500)	Oct 2016
PennTap Learning Factory Grant Recipient ($3500)	Aug 2016
Erickson Grant and Whitman Endowment Recipient ($5000)	June 2016
1st Place at HackPSU	Nov 2015
Penn State Engaged Scholarship Award	Nov 2015

Resume built with HTML & CSS