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Ryan G. Stoltz

Education

Winston-Salem, NC **Wake Forest University** **August 2018 - June 2022**

- **Major:** Computer Science, B.S.
- **Minor:** Philosophy
- **Fundamental Courses:** Data Structures and Algorithms (I & II), Programming Languages, Computer Systems (I & II), Systems Analysis and Design (SDLC)
- **Upper-level Courses:** Database Management Systems, Software Engineering, Computer Security, Computer Architecture, Mobile and Pervasive Computing, Deep Learning, Cloud Computing

Work Experience

Software Development, Intern **Smoodi (Startup)** **February 2022 – May 2022**

Smoothie Machine (https://www.getsmoodi.com) : Automated, self cleaning smoothie machine

- Designed product showcase scenes and functions for mobile payment application
- Implemented and showcased core navigation and security features within the application to improve UX and reduce financial vulnerability
- Assisted in machine assembly, configuring software and undergoing extensive unit testing in preparation for trade shows and pitch events
- **Skills employed:** React.js, html, css, git (using gitlab), postman, Amazon S3, arduino and Rpi configuration, Python, Stripe payment processing

Systems Development, Intern **Zyter Inc.** **May 2021 – August 2021**

ZyterHome (https://www.zyter.com/zyterhome/) : Remote patient management for provider practices

- Created technical showcase and tutorial for a product launch with a major health care company
- Designed tele-health triage and virtual appointment workflows to validate system requirements and structure development goals for each sprint
- Tested device hardware and data transmission, logging any bugs or errors
- **Skills employed:** Jira, Slack, Github, Figma, Microsoft Office Suite, Lucidchart

Major Projects (Fall 2020 - Present)

AI Driven Portable Emotion Classifier

- Developed a python application to approximate the likelihood that a user's facial features indicate one of six common emotions
- Utilized OpenCV and haarcascades' facial recognition software to read and classify emotions from static images or from live video feed
- Ported the classifier to a raspberry pi through only installing necessary components of OpenCV and pretraining the CNN prior to porting its optimized weights
- **Technologies Applied:** Python, Xception, Keras, OpenCV, NumPy, CNNs, Bash scripts

AI Driven HTML Website Generator (from Image)

- Created a neural network capable of interpreting HTML code derived from an image
- Encoded and decoded segments of the picture (tensor) through an LSTM
- **Technologies Applied:** Python, InceptionResNetV2, LSTM, Tensorflow, Matplotlib, RNNs

Ultrasonic Wrist Sensor with Vibration Motor (Intended to assist people with visual impairments)

- Designed a wrist device to track a user's proximity to objects and vibrate with increasing intensity the closer the user gets to the object
- Expanded upon the concept to pass distance and vibration intensity data to a flask server, alerting a potential caretaker if a collision might have occurred
- **Technologies Applied:** Arduino nano, Python, Flask, ultrasonic sensor, vibration motor, HTML, CSS

Meal Preparation App

- Designed a mobile application to source online meal recipes that only use preselected items and utensils already owned by the user
- Implemented Scrum based Agile development as the lead manager of the product backlog
- Built the logical flow of the application, establishing a user preference feature whereby certain cuisines, dietary preferences, or time constraints could influence recipe output
- **Technologies Applied:** Adobe XD, Jira, Javascript, Confluence, Bitbucket

Skills: *Coding languages*

Proficient: Python, HTML, CSS, C, shell code **Familiar:** Java, JS, C++, SQL, git