

# Dylan Gnatz

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## EDUCATION

**SEATTLE UNIVERSITY | GRAD. CERTIFICATE COMPUTER SCIENCE** Seattle, WA | July 2018 - June 2019  
GPA: 4.0 | Courses: Java II, Java III, OO Design, Algorithms and Data Structures, Databases, Computing Systems, Software Engineering

**SEATTLE UNIVERSITY | B.S. MARINE BIOLOGY, MAGNA CUM LAUDE** Seattle, WA | Sep 2013 - Dec 2018  
GPA: 3.78 | Courses: Calculus, Statistics, Bioinformatics, Intermediate GIS

## WORK EXPERIENCE

**T-MOBILE | IoT SOFTWARE INTERN** Bellevue, WA | May 2019 - Present

- Built a full-stack NB-IoT prototype of a narrowband logistics tracker, with real-time GPS and environmental condition data accessible via a React.js web app. Deployed the API and web client to Azure.
- Designing and building a missing person finder called WaldoEdge that leverages edge computing with AWS Greengrass, facial recognition with the Raspberry Pi 3, and LPWAN Cat-M1 IoT via the Hologram Nova.

**RUTHERFORD BIOINFORMATICS LAB | STUDENT DEVELOPER** Seattle, WA | April 2017 - August 2017

- Collaborated on building a Python application that iteratively mutates nucleotide sequences to create biologically credible descendant sequences.
- Integrated queries via the BioPython API to fetch sequence and protein domain data directly from NCBI databases.

**NOAA | HOLLINGS RESEARCH INTERN** Santa Cruz, CA | June 2016 - Sep 2016

- Participated in a research cruise surveying juvenile salmon populations from San Francisco, CA to La Push, WA.
- Presented results at the NOAA Hollings Research Symposium in Silver Spring, MD.

## SKILLS

PROGRAMMING LANGUAGES	Java, Python, C++, JavaScript, SQL, HTML, CSS
TECHNOLOGIES/ENVIRONMENTS	React.JS, Node.js/Express, Flask, AWS, Arduino, UNIX, Azure, Git/Github
GENERAL SKILLS	REST APIs, OO Design, Agile, Algorithms, Database Design, Unit Testing
INTERESTS	IoT, Edge Computing, Machine Learning, Cloud Computing, 5G

## PROJECTS

**T-MOBILE NARROWBAND-IOT HACKATHON | ARDUINO, TWILIO, EXPRESS.JS, FIREBASE**

Collaborated with teammates to design and build an Android app that monitors the environmental conditions of houseplants or crops utilizing narrowband microcontrollers and Twilio. Soil moisture, temperature, and humidity measures are logged hourly and sent to Twilio, which pushes the data to a Google Firebase database. When the readings are outside user specified parameters, the user's phone receives a push notification.

**XENOCASH BLOCKCHAIN CRYPTOCURRENCY AND EXCHANGE | PYTHON, FLASK, MYSQL, POSTMAN**

Designed and implemented a proof-of-work mined, SHA-256 secured blockchain cryptocurrency and MySQL database model for a basic cryptocurrency exchange. Models a single Fiat/XENO trading pair and pushes transactions to the blockchain. Trading records are stored in the exchange's MySQL database.

**GOOGLE HASHCODE 2019 | JAVA**

Participated in Google's HashCode 2019 competition, tackling an algorithmic challenge of optimizing the interest factor of a slideshow of pictures, given a set of tags and rules for maximizing interest.

