

Sky Johnson

Computer Science, Math,
Creative Technology & Design

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Education

University of Colorado Boulder

Cumulative GPA: 3.36, Dean's List

Aug 2016 - May 2020

Major: B.S. in Computer Science

Major GPA: 3.514

Relevant Coursework: Capstone: Entrepreneurship, Machine Learning, Biological Networks, Numerical Computation, Database Systems and Design, Chaos Dynamics, Principles of Programming Languages, Algorithms, Systems

Major: B.S. in Creative Technology & Design

Major GPA: 3.657

Relevant Coursework: Physical Computation, Game Development, Web Design, 3D Modeling, Typography, Photography

Minor: Applied Mathematics (Focus: Theoretical Statistics)

Relevant Coursework: Markov Chains & Monte Carlo Sims, Statistics, Appl. Probability, Linear Algebra, Diff Eqs.

Projects

Libnosis, Capstone

- Created a functional PaaS application that allowed data scientists to rapidly share, collaborate, and deploy ML models.
- Participated in the 2020 New Ventures Challenge hosted by CU for rising startups.
- Created a website in addition to a python library that could containerize and separately run models in production.
- Implemented a CD/CI pipeline using GitLabs and Docker for the project repository.

Technologies: React, Typescript, PostgreSQL, Google Cloud Platform, Kubernetes, Docker, Heroku, GitLab CD/CI

SSR Fullstack Posting Board

- A simple fullstack posting for users to register, login and post new messages. Featuring server side rendering using Next.JS and React, Apollo GraphQL and PostgreSQL for database technologies, and Redis for caching cookies.
- Deployed on Digital Ocean using Docker containers. Located at <https://simpleblog.jskylabs.xyz/>

Technologies: React, Typescript, NodeJS, Docker, NextJS, GraphQL, Apollo, Redis, PostgreSQL

Human Contact Networks with GANs

- Implemented a random graph model involving Generative Adversarial Networks trained on Human Contact Network Data for simulation with compartmental models to study infectious spread over a population using Python and NetworkX.
- Used Tensorflow to create GANs trained against school interaction data.

Technologies: Python, Tensorflow, Keras, NetworkX

Airbus Maritime Identification, CNNs & ResNET

- A paper that explored different implementations of two common classification Neural Nets for boxing.
- Compared the computational tradeoffs of such algorithms over maritime shipping routes from satellite imagery.

Technologies: Python, Pandas, Keras, PyTorch, CNNs, ResNET, UNet

Employment

Undergraduate Research Assistant

Mar 2019 - May 2020

IronLab, University of Colorado Boulder

- Developed software packages using Unity and ROS to vastly decrease the time it takes to start and create a Human-Computer/Robotic Interaction experiment for researchers in the lab.
- Adapted and streamlined previous projects to new hardware, Such as the HoloLens, Oculus RiftS, and Quest.

OIT Student Assistant

May 2018 - Aug 2019

Office of Information Technology, University of Colorado Boulder

- Ensured a high level of uptime and rapid service on the university's distance learning and classroom capture services.
- Worked on a large team to maintain, upgrade, and document the IT needs of the University. As well as create many multimedia assets to decrease onboarding time for new professors and students.

Skills

Languages

Typescript, Javascript, Python, C#, Java, C/C++, R, Arduino, Processing, OpenSCAD

Technologies and Libraries

React, Unity, PostgreSQL, ROS, NodeJS, Express, AWS, Auth0, Heroku, Netlify, Git, TensorFlow, OpenCV, D3.js, Jest

Software and Services

Adobe Creative Cloud, Anaconda, JupyterLabs, Kubernetes, Docker, Github, Gitlab (CD/CI), Vercel, DigitalOcean, Netlify