Prannav Gupta

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Education

University of Illinois at Urbana-Champaign **2018 – 2022**

Bachelor of Science in Computer Engineering GPA: 3.70/4.0

College of Engineering James Scholar (Honors), Eta Kappa Nu (IEEE-HKN) Dean's List Spring' 19, Spring' 20

Related Coursework: Artificial Intelligence* (CS 440), Distributed Systems* (CS 425), Algorithms* (CS 374), Computer Systems and Engineering (ECE 391), Applied Parallel Programming (ECE 408), Data Structures (CS 225), Computer Systems and Programming (ECE 220, Course Assistant SP,FA '20) * = Fall 2020

Skills: C++, C, Python, x86, CUDA, C#, HTML, Clojure, AWS, Unity, Virtual Reality, Internet-of-Things, Operating Systems, Distributed Systems*

Work Experience

National Center for Supercomputing Applications **JUNE 2020 – AUG 2020**

SPIN INTERN URBANA, IL

- Designed and implemented an application (**C++** and **Python**) to perform detection of human fall under Dr. Volodymyr Kindratenko
- Used a **multi-threaded** approach to achieve high performance on the edge (Raspberry Pi + Intel NCS VPU)
- Utilized the Intel **OpenVINO** toolkit to deploy a I3D Deep Neural Network on a **VPU** and performed analysis
- Implemented a notification system to send alerts over SMS using **Twilio**

Healthcare Engineering Systems Center (CSL) / Airv Labs **JUNE 2019 – JAN 2020**

SOFTWARE ENGINEERING INTERN CHAMPAIGN-URBANA, IL

- Created the core of the Authoring Tool using **Unity C#** to help instructors create cross-platform (Oculus and SteamVR) **Virtual Reality** learning environments
- Created a **Django REST API** to seamlessly roam user profiles across the cloud and the various frontends (VR)
- Used ORM's and serializers to achieve end-to-end object-oriented design

Illinois State Water Survey **AUG 2018 – FEB 2019**

UNDERGRADUATE RESEARCH ASSISTANT CHAMPAIGN, IL

- Built an image processor for the ISWS Lake snow effect identifier tool to detect a region-of-interest using **Python** and **OpenCV**
- Processed large quantities of LIDAR data using Python and used open-source libraries such as matplotlib to interpret the data
- Conducted field experiments for the NSF funded SAVANT project to analyze the effect of stable boundary layers on crop productivity

Projects

CS 498 INTERNET-OF-THINGS (COURSE DEV) **JUL 2020 - AUG 2020**

Designed the overall structure and theme for CS 498 IoT where students learned about **IoT** by building an autonomous driving vehicle. Created a **peer-to-peer** (p2p) cross-platform application to send/receive telemetry and other data over **Bluetooth** (RFCOMM) between the vehicle and a desktop (Electron) app

PICBOT **JANUARY 2020 – MAY 2020**

Collaborated with a team to create a **Deep Neural Network** from scratch to recognize hand drawn Pictionary images using **CUDA C++**. Utilized various techniques like streams and shared memory to improve performance on a **GPU**

ILLC3 **FEBRUARY 2019**

Co-Created an extension to add support for the **LC3 assembly language** for Visual Studio Code

Top 10 at HackIllinois 2019 and has **350+ installs** from the Visual Studio Code marketplace