AKASHPRABU A C

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EDUCATION

Bachelor of Engineering — **Bannari Amman Institute of Technology** — *Erode, TN, India* — **08/2018 - 05/2022**

- Major in Computer Science and Engineering | CGPA: **9.65/10** | **2nd/240** students.
- Relevant Courses: Data Structures, Design and Analysis of Algorithms, Software Engineering, Operating Systems, Software Testing.
- Independent Courses: CISCO CCNAv7 (*CISCO*), Cloud Computing *(UIUC - Coursera),* BeADevOpsPro *(iNeuron)*.

EXPERIENCE

Software Development Engineer Grad — **CSG Systems International** — *Bengaluru, KA, India* — **07/2022 - Current**

- Developing a microservice to handle the policy charging and rating of a user's profile with 5G-supported plans, which will process depletion in the subscriber's available entitlement balance in real-time providing scalable solutions to our customers, like Google Fi AT.
- Engineered a solution to utilize the existing code of **4G (Diameter)** and **5G (nCHF)** microservices from AWS cloud-dependent services into a Stand-alone service that can be deployed on any cloud platform/on-premises platform using Kubernetes/OpenShift.
- Collaborated with teams to re-architect the entire 4G and 5G microservices **to reduce load** and created a new microservice (DMS) to support and handle the CDRs (Call Detailed Records) from these microservices for offline processing and user report bill generation.
- Developed an algorithm for highly efficient Bulk upload Functionality for subscribers' data, thus reducing CPU and Memory usage.

Software Development Engineer Intern — **CSG Systems International** — *Bengaluru, KA, India* — **12/2021 - 06/2022**

- Developed a **Go-based** transformation tool to perform data migration on legacy data sources, **cutting task execution time by 60%.**
- Implemented a function in 4G services to allow the high-speed wireless communication standard **VoLTE** calls to authenticate, authorize, and charge them. Enabled support to visualize the real-time VoLTE calls based on the usage of different MVNOs, such as Billion Connect.

Software Engineer Intern — **Hyperwork** — *Emden, NI, Germany* — **08/2021 - 11/2021**

- Implemented designs and backend functionalities and created the website for ReflectSecurity, a cybersecurity startup in Chennai, India.
- Handled API designs, database migrations, and time and accuracy profiling of existing backend servers in Golang and Python.

MLOps Intern — **TheSmartBridge** — *Hyderabad, TG, India* — **05/2020 - 07/2020**

- Implemented an image segmentation model into an end-to-end product that provides this model as a service using Triton and IBM Cloud
- Contributed to the implementation of config-driven end-to-end testing utility covering various edge cases using Terraform.

SKILLS AND TOOLS

- C | C++ | GoLang | Python | HTML | CSS | Javascript | Docker | Kubernetes | Terraform | MySQL | PostgreSQL | MongoDB | Git | Trino
- AWS | Openshift | Redis | CI/CD Tools - Azure DevOps | Nats | Grafana | Prometheus | Linux | DBeaver | Minio | Postman | VS Code
- Microservices | Fullstack | Cloud Computing | DevOps Methodology | English, Tamil – *All professional proficiency or above*

PROJECTS, PATENT, RESEARCH AND JOURNAL PUBLICATION

- **Soldier Strap:** [*Arduino* | *Mesh Algorithm* | *GPS, Lora SX1278, ESP32, MAX 30100 and MLX90614 sensors* | *0.96 inch OLED Display*] - *2021*

Developed a hand-worn device that checks for the soldier's vital signs and geographical location and sends a signal to the base station in the absence of internet access. It forms a mesh network with other devices to expand range and broadcast SOS alerts within the network. Modified this project for women's safety in non-network areas. **Filed and published a patent. Application No. 202141025203**

- **WashBot:** [*Ultrasonic and camera with Infrared sensor* | *Solenoid valve* | *Actuators* | *7-inch OLED display*| *Microprocessors* | *VGG19 model*] - *2020*

Developed a fully automated smart handwash monitoring device that monitors hand gestures and assists users while washing their hands as per WHO guidelines. Triggers an alert if the procedure is not done properly. **Awarded funding of $7000 USD** from the Derbi Foundation.

- Studied and contributed to Enhancing Heart Disease Prediction Through KBEST-PCA Fusion Feature Selection and Ensemble Modeling With Gaussian Naive Bayes Boosting. Which was later published in the journal IJFMR (2023).
- Explored approaches for early-stage cancer segmentation. Contributed to research work on fine-tuning PRS2-OCNN on reduced feature sets to accurately segment melanoma lesions based on their risk levels. Expected to be published in IEEE Journal by December 2023.

ACHIEVEMENTS

- Secured **Runner-up** position in Smart India Hackathon hosted by DRDO (Defense Research and Development Organization) (2020)
- Won 1st prize in Imagine Cup for the project **Soldier Strap** conducted by National Engineering College, Trichy (09/2020)
- Won 1st place in the Ready, Set, Database contest at the event conducted by Sairam Engineering College, Chennai (10/2021)

LEADERSHIP AND EXTRACURRICULARS

- Collaborated with youth-driven NGO **Way For Life** in creating **53 solar lamps** that replace traditional kerosene lamps (2023)
- Served as a **Student Mentor** in CodeCircle club, organising orientation events and mentoring the institute freshmen (2019-2022)
- Taught schoolchildren from marginalized communities in Sathyamangalam town and helped them clean their campus (2018-2022)
- Won 2nd Prize in State level Men's Tennis Team Event at the **Anna University Zonal Tournament 2019-20** (2019)
- Won 3rd prize in State level Men's Tennis Singles at the **Chief Minister Trophy 2019-20** conducted by SDAT (2020)