Bhargavi Poyekar

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Education

- **University of Maryland - Baltimore County** **Maryland, United States**
  Masters - Computer Science; GPA: 3.88 Aug '22 - May '24
  Courses: Advanced Operating Systems, Principles of Computer Security, Neural Engineering, Machine Learning, Data Visualization.
- **Sardar Patel Institute of Technology, University of Mumbai** **Maharashtra, India**
  B.Tech - Computer Engineering; GPA: 3.81 Aug '18 - May '22
  Courses: Object-Oriented Programming, Data Structures, Analysis Of Algorithms, Artificial Intelligence, Machine Learning, Networking

Technical Skills

- **Languages and Databases:** Python, Java, C, PHP, Go, JavaScript, SQL, HTML, Dart, MySQL, SQLite, MongoDB
- **Frameworks:** Django, Django-Rest, Laravel, Angular, Flutter, Android Studio, Scikit, TensorFlow
- **Others:** GIT, Linux, Ansible, Tableau, Matplotlib, Jupyter, Pandas, NumPy, Bootstrap, jQuery, API, JWT

Professional Experience

- **Cybersecurity Summer Intern, University of Maryland Baltimore County** **Jun '23 - Present**
  - Automated the launch, configuration, and management of **50 virtual machines (VMs)** using Ansible.
  - Established a **Django website** for VM management, featuring a self-signed SSL certificate, resulting in a **30% latency reduction**.
  - Streamlined VM deployment and ensured consistent configurations across VMs using **Ansible playbooks**, integrating command line operations and Python scripting, resulting in a **40% reduction** in configuration time.
- **Graduate Research Assistant, University of Maryland Baltimore County** **Sep '22 - Mar '23**
  - Extracted **4 time-based**, **3 frequency-based**, and **2 non-linear HRV features** from ECG signal data using Python, providing valuable insights contributing to the successful research completion.
  - Improved model accuracy by **10%** through optimization of machine learning models and innovative experimentation with Gaussian noise, while effectively communicating experimental approach and results to foster collaborative discussions, showcasing significant impact on project success.
- **Laravel Developer Intern, Origin Cloud Tech** **Jun '20 - Aug '20**
  - Led development of a **scalable** LMS Website using the Laravel MVC Framework, exceeding project requirements and resulting in a remarkable **increase of 150** active users.
  - Enhanced system security with **multifactor authentication** via email and mobile OTP, integrating diverse APIs including payment gateways (PayPal, Razorpay), messaging, location, and Zoom, increasing website efficiency by **40%**.
  - Crafted an appealing user interface using **HTML, CSS, Bootstrap, and Javascript**, perfected database management with **well-structured design** and CRUD queries, demonstrating UI/UX design skills and reducing query execution time by **25%**.
- **Website Developer Intern, Ask in City** **May '20 - Jun '20**
  - Elevated user experience and website functionality by designing and implementing new e-commerce features using **HTML and PHP**, leading to a **20% increase** in user engagement.
  - Refined project efficiency through active participation in daily **scrum meetings** and seamless team collaboration, resulting in a **10-day** reduction in project completion time.

Projects

- **Token Manager (Socket Programming, Replication, Atomic Semantics, Fail Silent model):** Developed a client-server application for token management. Implemented replication (1, N), supporting multiple reader nodes and a single writer node. Deployed a resilient **read-impose-write-all** protocol, ensuring accurate maintenance of token state information and fail-silent behavior for server nodes. **Tech: Go, gRPC, Google Protocol Buffer.**
- **Cyber Attacks and Prevention (ARP Poisoning, SSL/TLS, Diffie Hellman, RC4, DOS, Firewall):** Simulated **MITM** attacks, ensuring interception and access to sensitive information. Implemented secure communication channels for protected data transmission. Expertise in mitigating DOS attacks and safeguarding systems. **Tech: Netcat, TcpDump, Arpspoof, Apache, Linux, Openssl, UFW, Hping**
- **Face Recognition Attendance System for Online Classes (Neural Network, Computer Vision):** Created a reliable attendance system with an accuracy of **93%** for online classes that utilizes sophisticated face detection and recognition algorithms. Optimized the model to function seamlessly even in adverse conditions such as low light intensity, maximum head tilt, and blurred images. **Tech: Python, HOG, VGG, Django, CNN, Scikit-learn, Pandas, Numpy, Matplotlib.**
- **EMOMUSIC: (Computer Vision, Web Development):** Engineered an intuitive application achieving **96%** accuracy in identifying a user's emotional state through facial expression analysis. Leveraged this analysis to offer personalized playlist recommendations, enhancing user experience and satisfaction. Created an advanced music player to play the recommended songs tailored to the user's emotional state. **Tech: Python, Django, CNN, HTML, JavaScript, SQLite**