ADITHI DEBORAH CHAKRAVARTHY

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OBJECTIVE

PhD in AI with 3+ years of industry experience building scalable ML systems, with a proven track record of innovation, including one granted and two pending patents. Strong expertise in computer vision, facial recognition, and model deployment using AWS and Docker. Passionate about developing impactful AI solutions at scale.

SKILLS

Languages	Python, Java, R, SQL, JavaScript
Frameworks	PyTorch, TensorFlow, Keras, Flask, FastAPI
Tools and Platforms	Docker, AWS (Certified Cloud Practitioner), Git, JIRA, Postman
DevOps	CI/CD, AWS Lambda
Front-end	React.js, HTML, CSS

EXPERIENCE

AI Developer — May 2021 - Feb 2024
Guardian RFID — *Maple Grove, MN*

- Developed and deployed AI systems for facial recognition, officer round scoring, and object/inmate tracking, contributing to 1 granted and 2 pending patents in vision-based safety automation.
- Led model development using PyTorch, TensorFlow, and Scikit-learn, with production deployment via Flask/FastAPI, Docker, and AWS.
- Built and maintained automated CI/CD pipelines for ML model testing and deployment, improving release reliability and minimizing downtime across production systems.

Full Stack Developer Intern — May 2020 - Aug 2020
PayPal — *Omaha, NE*

- Built interactive dashboards using Dash and React to support data-driven decision-making and team resource tracking.
- Developed backend logic integrated with MS SQL, improving application performance and usability for internal stakeholders.

Instructor — Aug 2017 - May 2021
University of Nebraska at Omaha — *Omaha, NE*

- Taught undergraduate courses in Web Development and Java, supporting students through hands-on learning and structured mentorship.
- Contributed to curriculum development and student success initiatives in foundational computer science courses.

PATENTS

1. Inmate Release Verification — US Patent US12205405B2 **Granted**, 2025.
2. Systems and Methods for Increased Correctional Facility Safety — US Patent US20230334389A1 *pending*.
3. Surveillance by Cooperative Computer Vision – US Patent US20250061721A1 *pending*.

EDUCATION

Ph.D in Information Technology, University of Nebraska at Omaha (USA)   2016 - 2021
GPA: 3.9

M.Sc in Artificial Intelligence, University of Southampton (UK)   2011 - 2012
GPA: 3.9

B.E in Computer Science and Engineering, Anna University (India)   2007 - 2011
GPA: 3.7

SELECT PUBLICATIONS

[1]   Adithi D Chakravarthy et al. "Towards automated distortion and health correlation for age-related macular degeneration". In: *2017 IEEE 17th International Conference on Bioinformatics and Bioengineering (BIBE)*. IEEE. 2017, pp. 486–491.
[2]   Adithi D Chakravarthy et al. "Predictive models with resampling: A comparative study of machine learning algorithms and their performances on handling imbalanced datasets". In: *2019 18th IEEE International Conference On Machine Learning And Applications (ICMLA)*. IEEE. 2019, pp. 1492–1495.
[3]   Adithi Deborah Chakravarthy et al. "An approach towards automatic detection of toxoplasmosis using fundus images". In: *2019 IEEE 19th International Conference on Bioinformatics and Bioengineering (BIBE)*. IEEE. 2019, pp. 710–717.
[4]   Adithi D Chakravarthy et al. "A thrifty annotation generation approach for semantic segmentation of biofilms". In: *2020 IEEE 20th International Conference on Bioinformatics and Bioengineering (BIBE)*. IEEE. 2020, pp. 602–607.
[5]   Adithi D Chakravarthy et al. "Semantic image segmentation using scant pixel annotations". In: *Machine Learning and Knowledge Extraction* 4.3 (2022), pp. 621–640.

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