PINKBIRD'S WEB APPLICATION ARCHITECTURE

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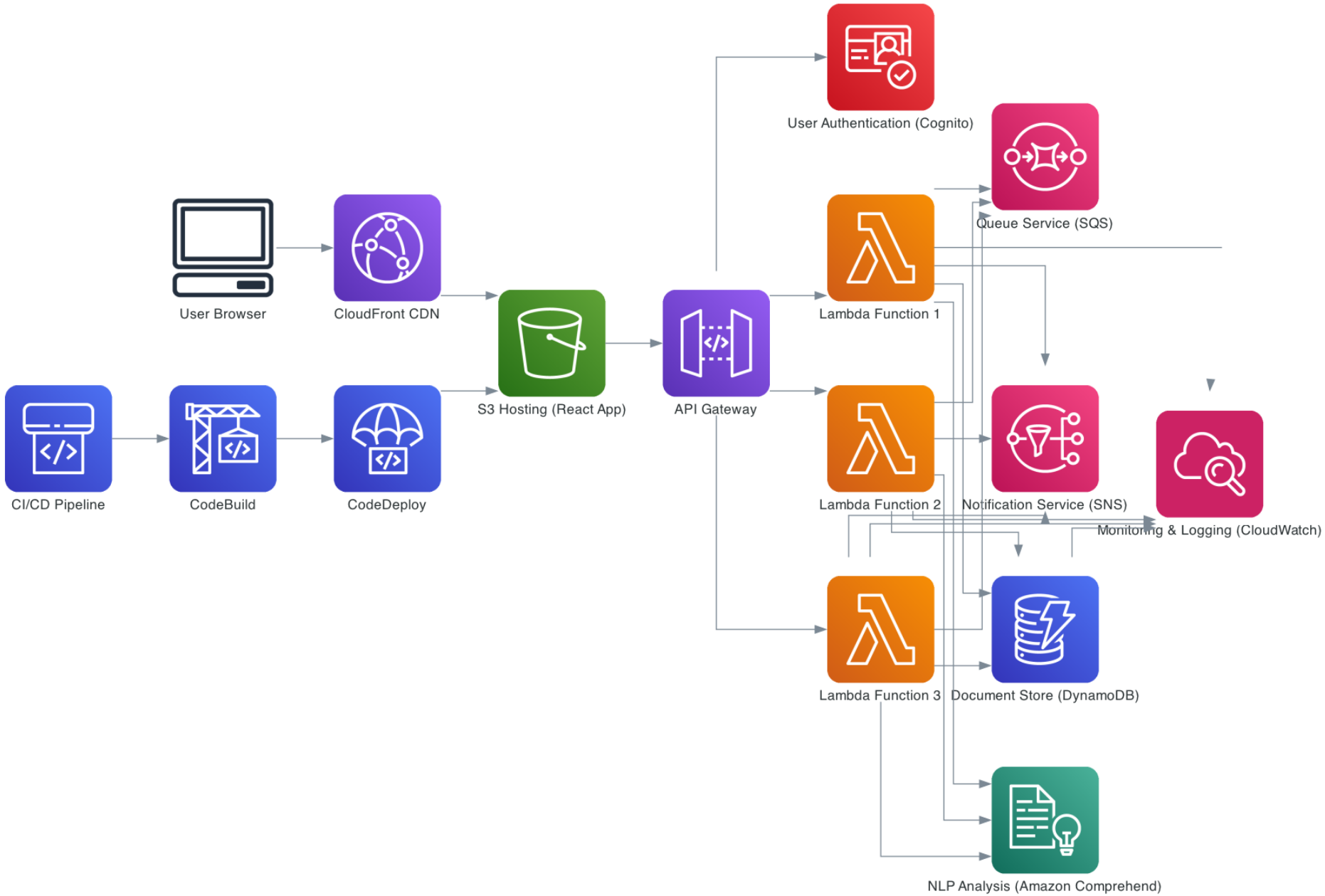
PROPOSED AWS ARCHITECTURE FOR PINKBIRD WEB APPLICATION

- **Objective:** Develop a scalable, secure, and modular web application for managing R&D grant applications.
- **Key Components:**
- **Frontend:** React-based application hosted on AWS S3 with CloudFront for content delivery.
- **Backend APIs:** Built using AWS Lambda and API Gateway, allowing serverless compute and API management.
- **Authentication:** AWS Cognito provides secure and scalable user authentication.
- **Data Storage:** Amazon DynamoDB as a reliable NoSQL document store for application data.
- **Machine Learning & NLP:** Amazon SageMaker for text mining and response generation.

- **Security and Monitoring:** AWS WAF for web security, and AWS CloudWatch for real-time monitoring and logging.



PinkBird Web Application Architecture

BENEFITS OF PROPOSED ARCHITECTURE

- **Scalability:** The architecture uses serverless and managed services, ensuring scalability and cost-efficiency.
- **Modularity:** Independent modules (frontend, backend, ML/NLP) allow parallel development and deployment.
- **Security:** AWS services provide robust security features, including WAF, Cognito, and IAM roles.
- **Performance:** Content is delivered efficiently via CloudFront, while DynamoDB provides fast data access.
- **Compliance and Reliability:** AWS ensures high availability, reliability, and compliance with local regulations.