

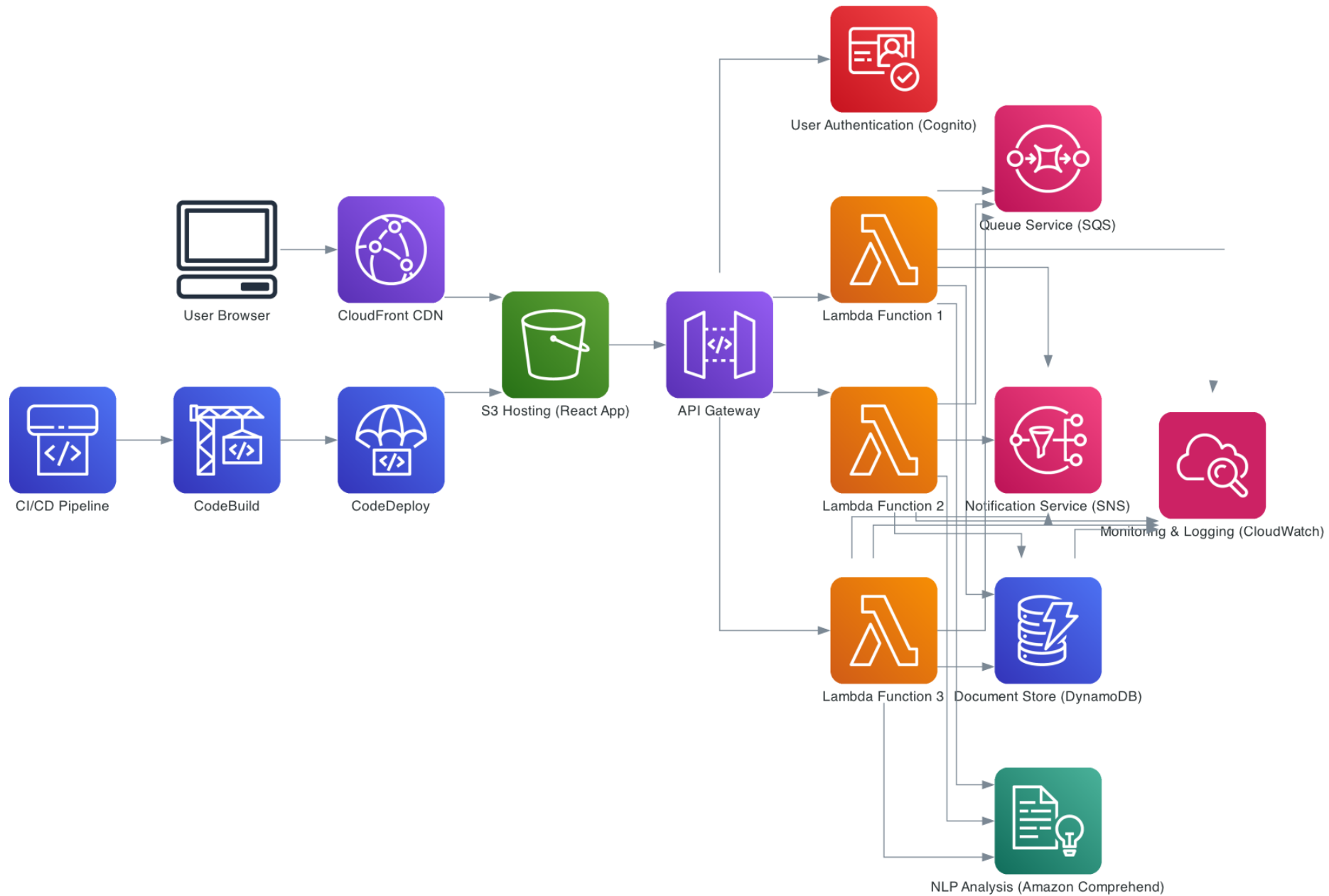
The background of the slide is decorated with numerous vertical columns of small, colorful dots. The dots are arranged in a way that creates a sense of depth and perspective, with columns on the left appearing to recede into the distance. The colors of the dots include various shades of blue, green, yellow, orange, red, and purple. The columns are of varying heights and are spaced out across the width of the slide.

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.