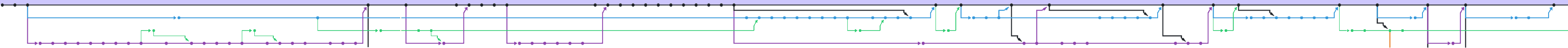


GitMatch: Open-Source Software Contribution Platform

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What's the Issue?

Learning developers currently struggle with finding resources to grow their skills and to find meaning full software projects to work on.

Additionally, project owners seeking contributors for their initiatives struggle to connect with enthusiastic students who can bring fresh perspectives and energy to their projects.

What's the Solution?

GitMatch is an online platform that aims to provide the opportunities and resources necessary to create skilled software engineers that can enter the technology industry confident in their abilities.

Furthermore, our platform serves as a breeding ground for new innovations, providing them with the opportunity to thrive and gain recognition.

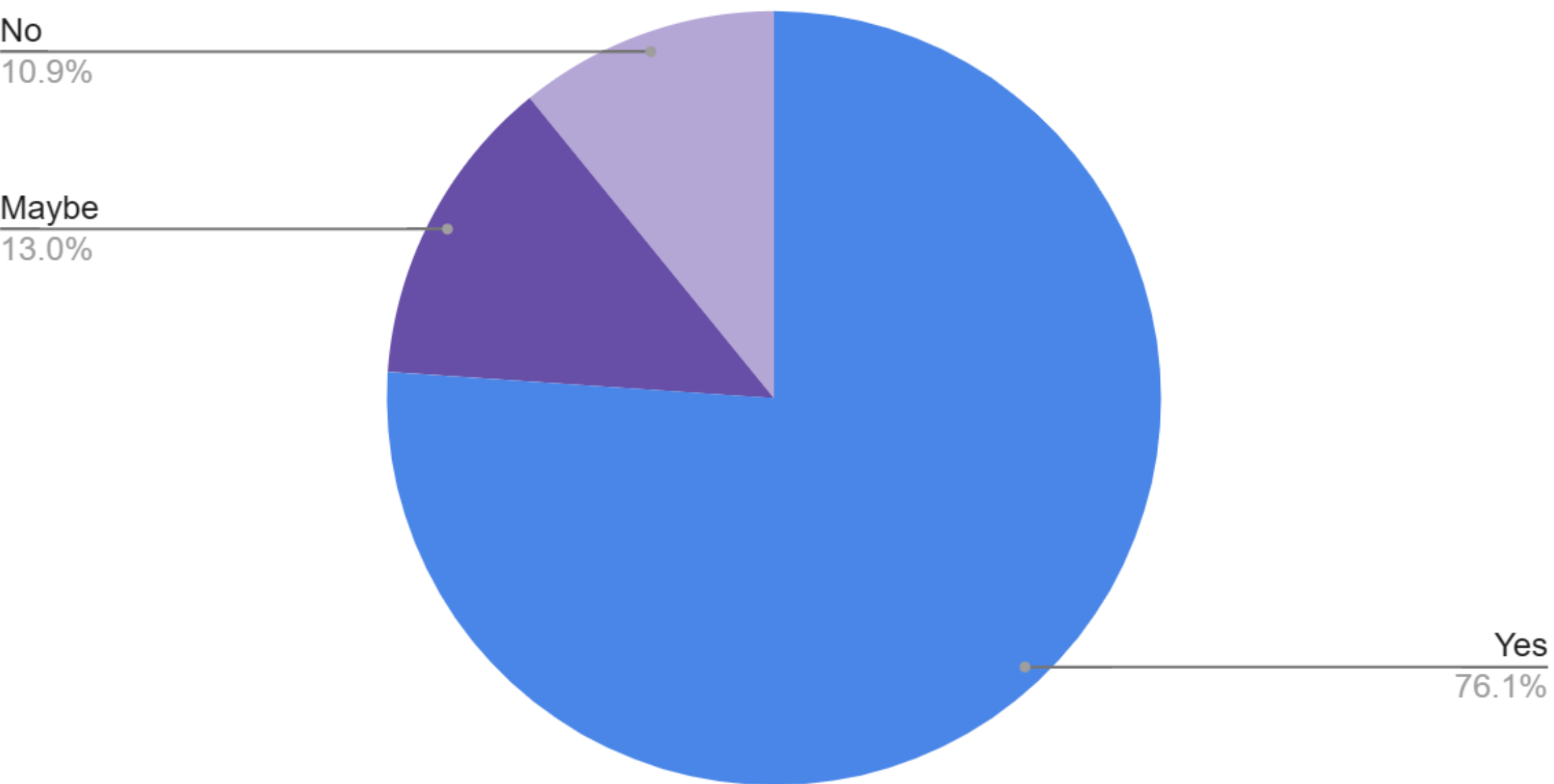
Technologies Used



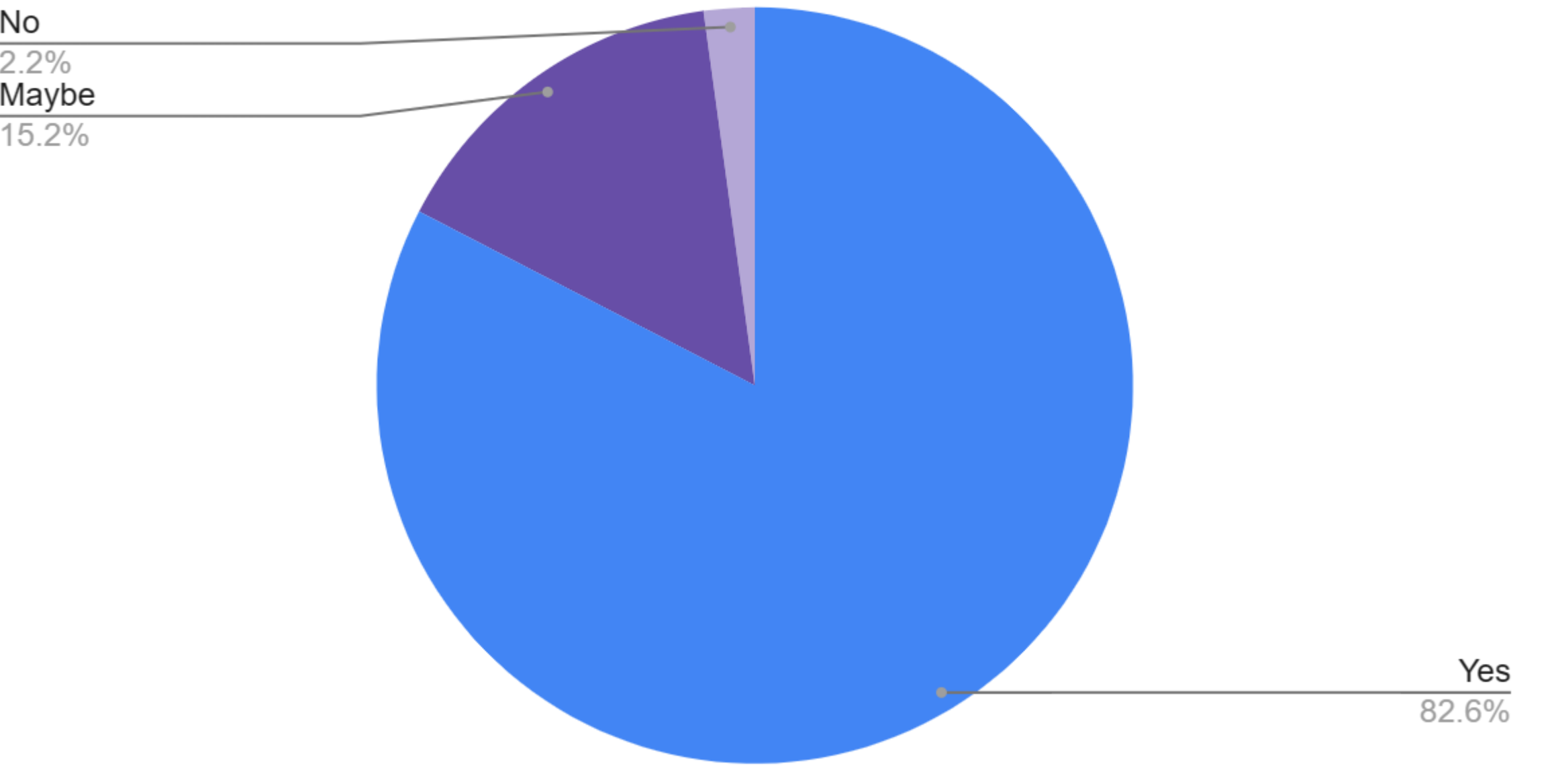
Related Courses: CSS 342, CSS 478, CSS 475, CSS 360

Data Gathered via User Surveys

Have you had trouble coming up with an idea for a project or spent a long time brainstorming?



Are you open to collaborating with others on software projects to gain experience?



This data was pulled from survey a of product interest and viability complete with students enrolled in Software Engineering courses

Data Queried from DynamoDB via AppSync

```
{
  "logType": "RequestMapping",
  "fieldName": "syncPostsModels",
  "resolverArn": "arn:aws:appsync:us-west-2:739292628626:apis/pmswyni2dzb5ff77ppkxeryhmu/types/Query/resolvers/syncPostsModels",
  "functionName": "QuerysyncPostsModelspreAuth0Function",
  "fieldInError": false,
  "parentType": "Query",
  "path": [
    "syncPostsModels"
  ],
  "requestId": "7fa60798-3ac1-4e6a-8dbd-f8172545a3fb",
  "context": {
    "arguments": {
      "limit": 1000,
      "lastSync": 1685426359825
    },
    "prev": {
      "result": {}
    }
  },
  "stash": {
    "authRole": "arn:aws:sts::739292628626:assumed-role/amplify-unhinged-staging-175143-authRole/CognitoIdentityCredentials",
    "conditions": [],
    "fieldName": "syncPostsModels",
    "metadata": {
      "dataSourceType": "AMAZON_DYNAMODB",
      "apiId": "pmswyni2dzb5ff77ppkxeryhmu"
    },
    "tableName": "PostsModel-pmswyni2dzb5ff77ppkxeryhmu-staging",
    "typeName": "Query",
    "unauthRole": "arn:aws:sts::739292628626:assumed-role/amplify-unhinged-staging-175143-unauthRole/CognitoIdentityCredentials"
  },
  "outErrors": []
},
"errors": [],
"graphqlAPIId": "pmswyni2dzb5ff77ppkxeryhmu",
"functionArn": "arn:aws:appsync:us-west-2:739292628626:apis/pmswyni2dzb5ff77ppkxeryhmu/functions/g574cjx6wngcjipo23bxcs6dti",
"transformedTemplate": "\n\n    \"version\": \"2018-05-29\",
    \"operation\": \"Sync\",
    \"limit\": 1000,
    \"nextToken\": null,
    \"lastSync\": 1685426359825,
    \"filter\": null\n  }\n"
```

How We Built It

The web app's backend system, built using AWS Amplify, required careful design and implementation. Amplify simplified communication between mobile/web developers and backends through user-friendly client libraries. It bundled services such as GraphQL API DynamoDB, S3 storage, and hosting, streamlining development. AppSync facilitated GraphQL API creation, compatible with diverse data sources.

Significant effort was invested in creating a robust database schema to accommodate future features. Custom operations were also crafted for type safety and error handling.

Integration of authentication flows was a key challenge, resolved using Amazon Cognito. Cognito offers various authentication methods for different user scenarios, Media Federation, and SAML-based Identity Providers. Integrating Cognito with other AWS services required understanding APIs, SDKs, and security models while adhering to best practices.

Key Achievements & Lessons

AWS Development Exposure: Gained experience with Amazon Web Services by developing a backend using various services such as Lambda, AppSync, EC2, DynamoDB, Cognito, OpenSearch, and API Gateway.

Business Logic and Algorithm Design: Collaboratively formulated a sophisticated matching algorithm. This algorithm accounted for user preferences, skill sets, and project information to provide customized recommendations

User Focused Design: Prioritized user needs through usability surveys and iterative design for a seamless platform experience.

Project Timeline

