React

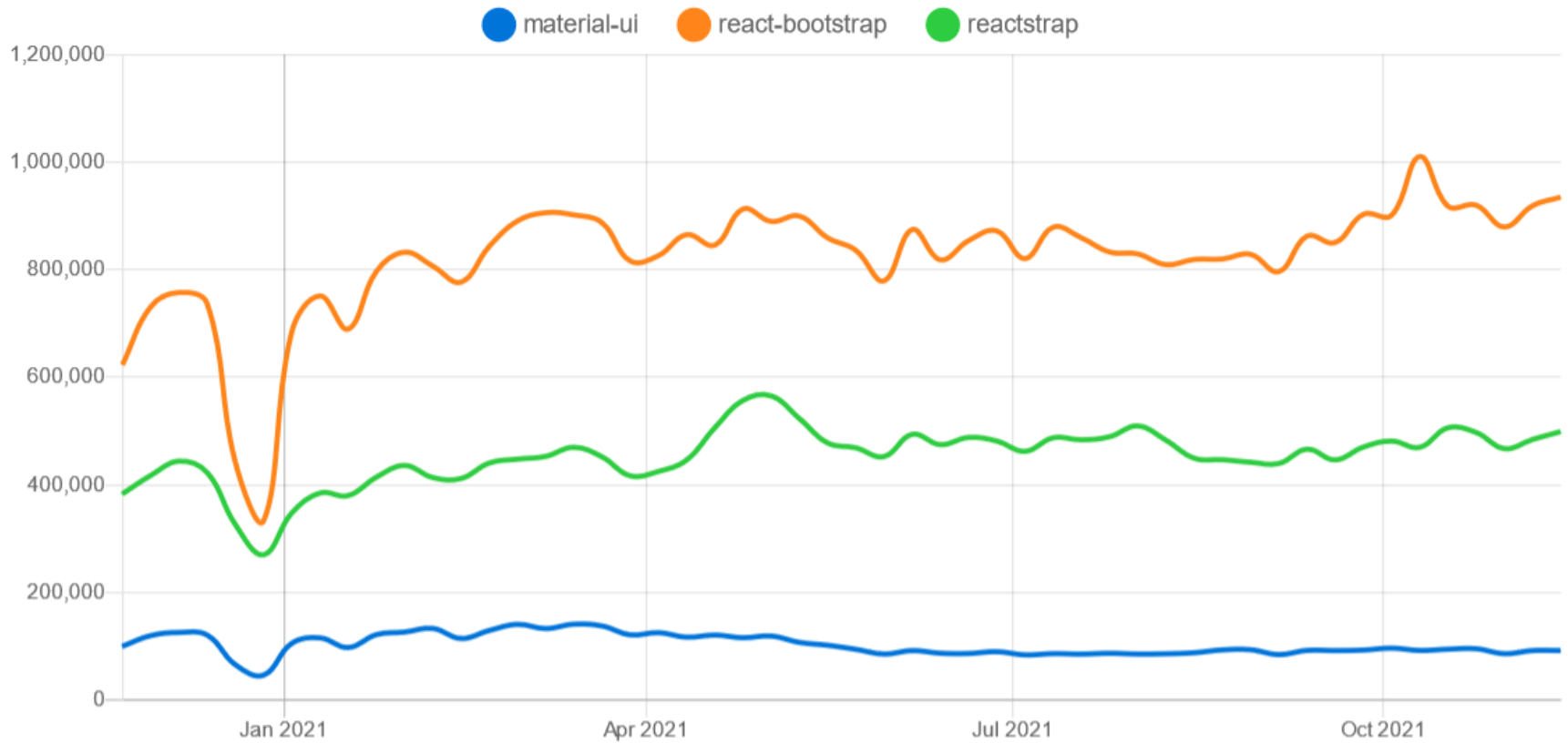## Bootstrap Framework & Notifying

React-Bootstrap?

- The most popular front-end framework (Bootstrap) **Rebuilt** for React.

- Website: https://react-bootstrap.github.io/

- https://www.npmtrends.com/material-ui-vs-react-bootstrap-vs-reactstrap
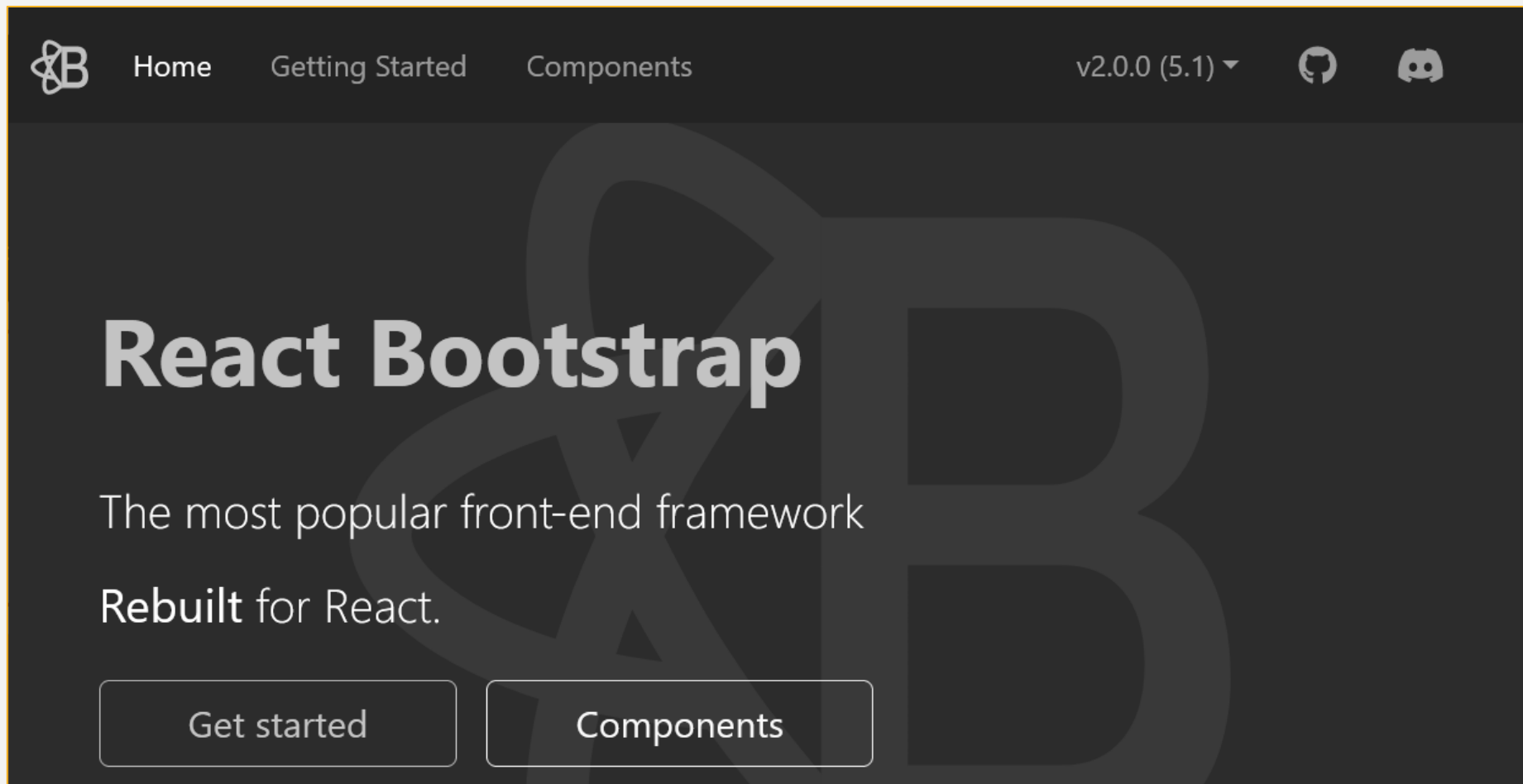
Integrating react-bootstrap

- Website:

  https://react-bootstrap.github.io/

- Installing package

  npm i react-bootstrap

- Adding stylesheet in "src/index.tsx" file

  import 'bootstrap/dist/css/bootstrap.css';

Applying Modal in Major.tsx

```tsx
import { Button, Modal } from "react-bootstrap";
```

```tsx
const Major = () => {
  const [majors, setMajors] = useState<IMajor[]>([]);
  const [major, setMajor] = useState<IMajor>({ id: 0, name: "" });
  const [showModal, setShowModal] = useState(false);

  const handleCloseModal = () => setShowModal(false);
  const handleShowModal = () => setShowModal(true);
```

```tsx
const handleChange = (e) => {
  const newData = { ...major };
  newData[e.target.name] = e.target.value;
  setMajor(newData);
};
```

```jsx
<Modal show={showModal} onHide={handleCloseModal}
       size="lg" backdrop="static" keyboard={false}>
  <Modal.Header closeButton>
    <Modal.Title>{major.id > 0 ? "Update" : "New"} Major</Modal.Title>
  </Modal.Header>
  <Modal.Body>
    <form>
      <div className="row">
        <Input label="Major name" type="text"
          id="txtMajor" name="name"
          onChange={handleChange}  defaultValue={major.name}
        />
      </div>
    </form>
  </Modal.Body>
  <Modal.Footer>
    <Button variant="secondary" onClick={handleCloseModal}>Close</Button>
    <Button variant="primary" onClick={handleSave}>Save</Button>
  </Modal.Footer>
</Modal>
```

```tsx
const showEditModal = (e: any, id: number) => {
  if (e) e.preventDefault();
  if (id > 0) {
    majorService.get(Number(id)).then((res) => {
      setMajor(res.data);
      handleShowModal();
    });
  } else {
    setMajor({ id: 0, name: "" });
    handleShowModal();
  }
};
```

+ Add ➡️
```tsx
<button type="button" className="btn btn-primary"
  onClick={() => showEditModal(null, 0)}>
  <i className="bi-plus-lg" /> Add
</button>
```

➡️
```tsx
<a href="/#" className="me-1"
  onClick={(e) => showEditModal(e, item.id)}>
  <i className="bi-pencil-square text-primary" />
</a>
```

```jsx
const handleSave = () => {
  if (major.id === 0) {
    majorService.add(major).then((res) => {
      if (res.errorCode === 0) {
        loadData();
        handleCloseModal();
      }
    });
  } else {
    majorService.update(major.id, major).then((res) => {
      if (res.errorCode === 0) {
        loadData();
        handleCloseModal();
      }
    });
  }
};
```

```jsx
<Button variant="primary" onClick={handleSave}>
  Save
</Button>
```

New Major

×

Major Name

[   ]

Close   Save

Major l

+ Add

#	Ma		
1	IT4		✎ 🗑
2	Marketing		✎ 🗑
3	Networking		✎ 🗑
4	Business Administration		✎ 🗑

Applying Navbar in Header.tsx

```tsx
<Navbar bg="primary" variant="dark" expand="md">
  <Container>
    <Navbar.Brand as={Link} to="/">Student Management</Navbar.Brand>
    <Navbar.Toggle aria-controls="basic-navbar-nav" />
    <Navbar.Collapse id="basic-navbar-nav">
      <Nav className="me-auto">
        <Nav.Link as={NavLink} to="/major">Major</Nav.Link>
        <Nav.Link href="/#">Student</Nav.Link>
      </Nav>
      <Nav>
        <Nav.Link href="/#">welcome to ...</Nav.Link>
        <Nav.Link as={Link} to="/login">
          <i className="fas fa-sign-out-alt"></i>
        </Nav.Link>
      </Nav>
    </Navbar.Collapse>
  </Container>
</Navbar>
```
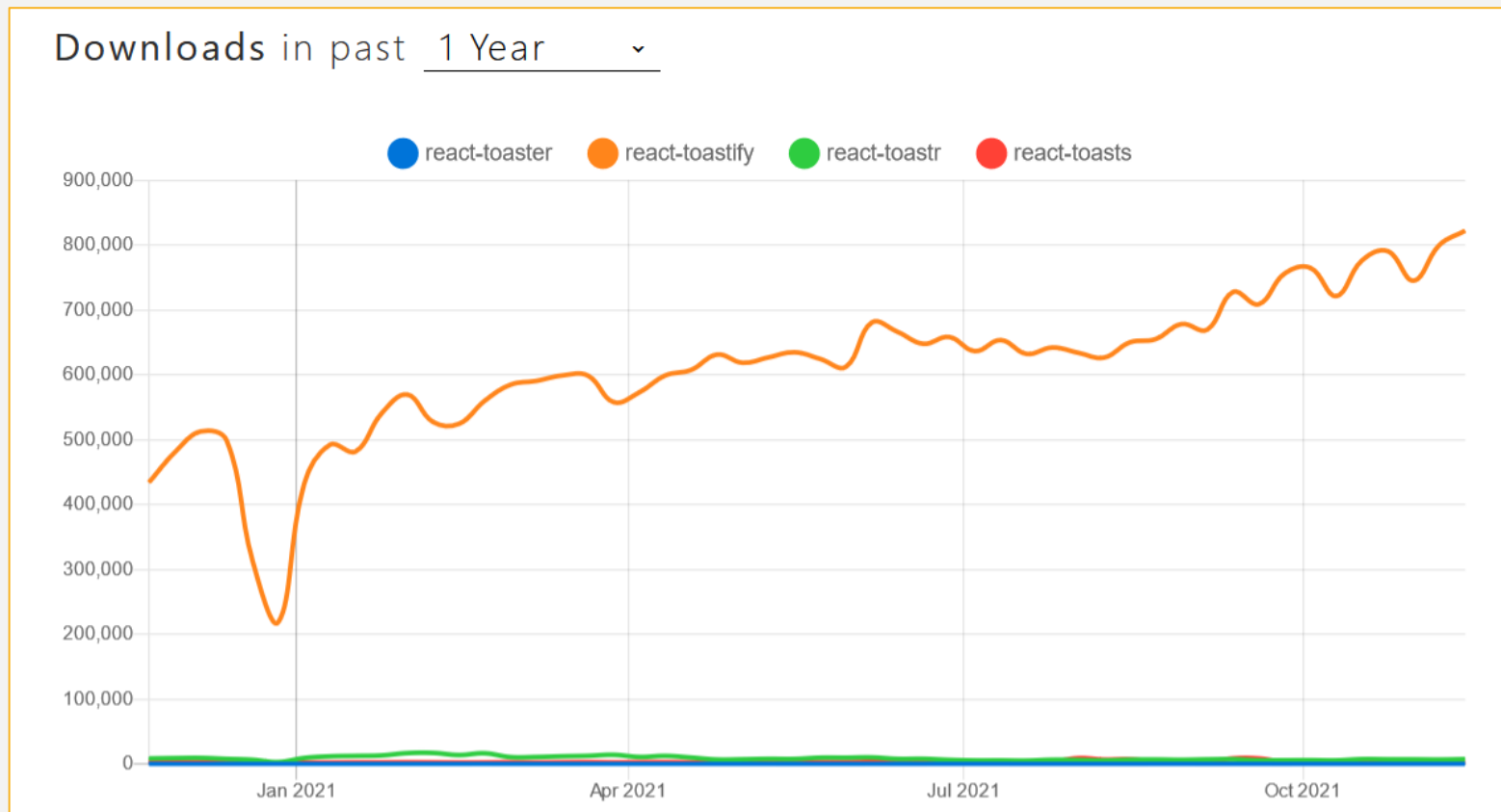
Student Management

Major list

+ Add

#	Major Name	
1	Information Technology	✏️ 🗑️
2	Marketing	✏️ 🗑️
3	Networking	✏️ 🗑️
4	Business Administration	✏️ 🗑️

React-Toastify?

- A library to show notifications in React App.

- Website: https://fkhadra.github.io/react-toastify/introduction/

- Trends: https://www.npmtrends.com/react-toaster-vs-react-toastify-vs-react-toastr-vs-react-toasts

Integrating react-toastify

- In terminal, type: npm i react-toastify

- In "index.tsx" file, import & configure "react-toastify"

```tsx
import { ToastContainer } from "react-toastify";
import "react-toastify/dist/ReactToastify.css";
```

```tsx
<ToastContainer
    position="top-right"
    autoClose={5000}
    hideProgressBar={false}
    newestOnTop={true}
    closeOnClick
    rtl={false}
    pauseOnFocusLoss
    draggable
    pauseOnHover
    theme="colored"
/>
<App />
```

Applying react-toastify in Major.tsx

- Modify handleDelete function

```
import { toast } from "react-toastify";
```

```
const handleDelete = (e: React.FormEvent<HTMLAnchorElement>, id: number) => {
  e.preventDefault();
  majorService.delete(id).then((res) => {
    if (res.errorCode === 0) {
      loadData();
      toast.warning("Delete successfully");
    } else {
      toast.error("Delete failed");
    }
  });
};
```

- Modify handleSave function

```
const handleSave = () => {
  if (major.id === 0) {
    majorService.add(major).then((res) => {
      if (res.errorCode === 0) {
        loadData();
        handleCloseModal();
        toast.success("Add successfully");
      } else toast.error(res.message);
    });
  } else {
    majorService.update(major.id, major).then((res) => {
      if (res.errorCode === 0) {
        loadData();
        handleCloseModal();
        toast.success("Update successfully");
      } else toast.error(res.message);
    });
  }
};
```

Testing Notification

⚠ **Delete successful** ✕

Major list

+ Add

#	Major Name	
1	IT45678	✏ 🗑
2	Marketing	✏ 🗑
3	Networking	✏ 🗑
4	Business Administration	✏ 🗑

Exercise

- Using "react-bootstrap" and "react-toastify" to improve delete function.

  - When user clicks on "delete" icon, show a modal dialog to confirm deletion.

  - When user confirms to delete, then call web API to delete selected row.

  - Show the notification after web API returns result.

Homework

- Implement "instructor" function with Bootstrap modal

New Instructor   ✕

Instructor Id *	Instructor Id
Full name *	Last name	First name
Gender *	⦿ Male ○ Female
Phone *	Phone number
Email	Email address

Close   Save

Instr...   + Add

#
1
2
3
4

THE END